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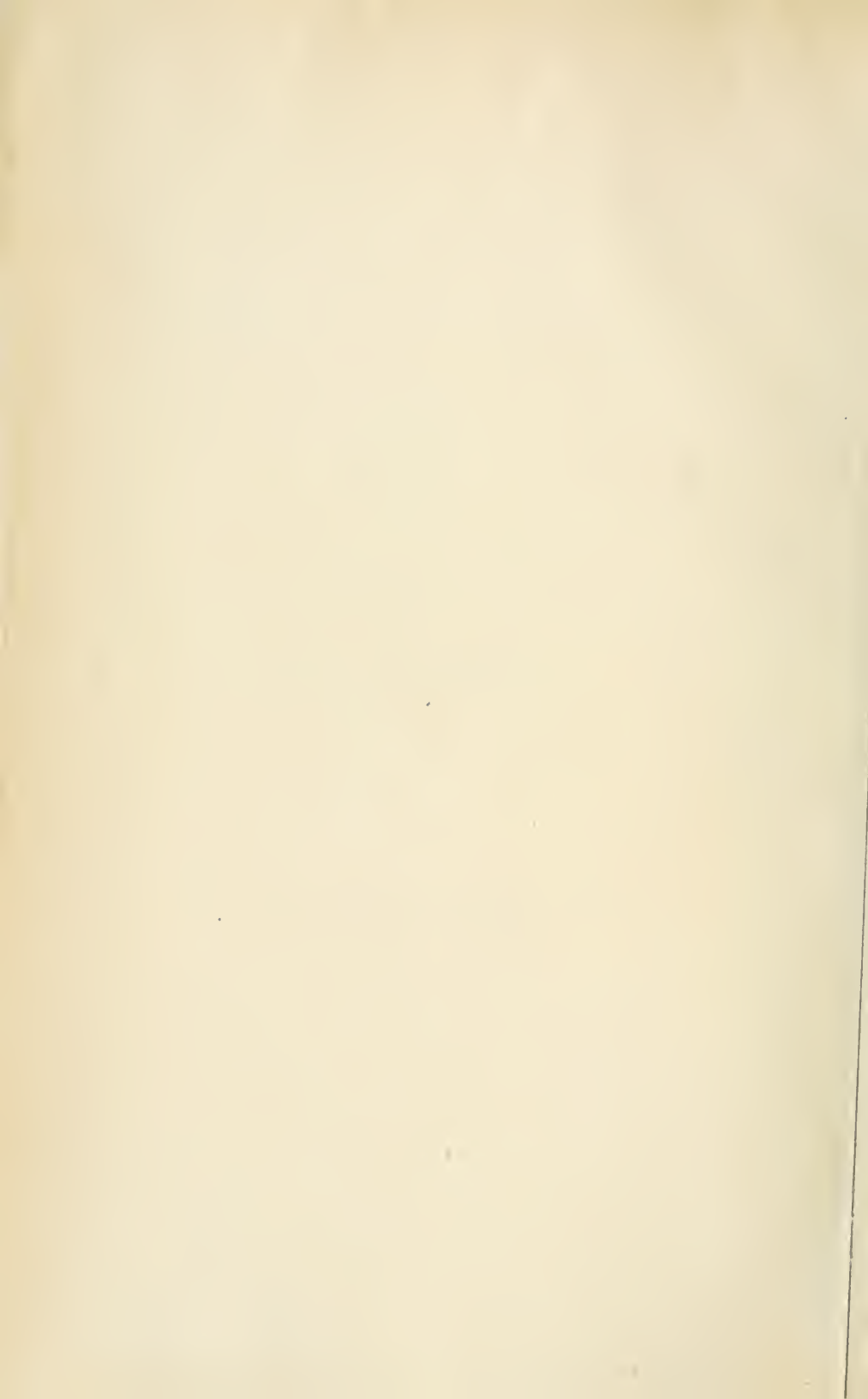
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THE JOURNAL
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*AN ANALYTICAL RECORD OF CURRENT LITERATURE RELATING TO
THE THROAT, NOSE, AND EAR.*

EDITED BY

R. NORRIS WOLFENDEN, M.D. Cantab.,
JOHN MACINTYRE, M.B. Glasgow,

AND

DUNDAS GRANT, M.A., M.D., F.R.C.S. Eng.,

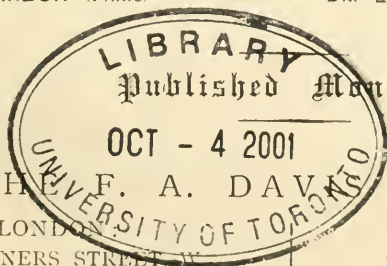
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CLINICAL CONTRIBUTIONS.

SERIOUS SYMPTOMS ARISING FROM RETENTION OF
NASAL DISCHARGE.

By Dr. MIDDLEMASS HUNT.

MISS H., aged twenty-three, was sent to me on Sept. 7 of this year as a probable case of malignant disease of the nose. The history she gave was that in November, 1890, she had a severe cold in the head with all the ordinary symptoms, except that there was an unusual amount of pain in the left eyeball and forehead, and that though the right nostril soon got well, the left continued to discharge a thin yellowish fluid which afterwards became thick and purulent, and had a very disagreeable odour. The left nostril gradually became more obstructed, and at last no air could be got through it. The pain in the eye, in the cheek, and across the forehead became also more severe, so that she could not sleep well at night, and could not read beyond a few minutes at a time. Pain was almost constantly present, and always got worse towards evening. For some months too the lachrymal duct had been obstructed, causing the tears to run over her cheek, and she had lost her sense of smell.

The appearance of the patient certainly gave one the impression that the case was a serious one. The left side of the face was swollen as a whole, and especially along the side of the nose; the left eye appeared to protrude, and had a dark discolouration under it, which had been noticed by her friends for two months previously. The entrance of the left naris

was filled by what looked like a large pale growth. The patient was very anæmic and thin, having lost much flesh since the commencement of her illness.

The supposed nasal growth was easily pushed aside with a probe, as it was only a fold of hypertrophied œdematous mucous membrane, springing from the external wall just below the anterior end of the middle turbinate. It formed a very effective valve to prevent the escape of the stinking mass of putty-like or cheesy material which filled every part of the nasal cavity beyond. The smell was most offensive, and made the business of scooping out the collected secretion extremely unpleasant. After thoroughly clearing the cavity, which I did not finish in one sitting, and the free use of an antiseptic nasal wash, all the symptoms disappeared and the discharge ceased. I also destroyed the fold of mucous membrane which had caused the obstruction by repeated applications of the galvanic cautery.

The above case corresponds in almost every particular with the following one which had come under my notice a year previously.

Mrs. G., a widow, aged fifty-five, was sent to me in August, 1890, suffering from right-sided nasal obstruction, with slight, but very foul-smelling, nasal discharge. The discharge had begun a year previously with pain in the right side of face, in right eye and forehead, following an attack of acute nasal catarrh.

For some months past the nasal obstruction had been complete, and "a growth," which bled freely on being touched, had appeared at the entrance to the right nostril. The neuralgic pains in cheek, eye and forehead had of late become very severe, disturbing her rest, and she became greatly reduced in her general health.

Her medical attendant had diagnosed syphilis, and treated her vigorously with mercurials till her teeth became loose and her tongue ulcerated, but without producing any effect on the nasal obstruction or the neuralgic pains.

The patient looked pale and thin, and there was considerable deformity of the face, produced by the swelling of the cheek along the right side of the nose. She also suffered from epiphora.

The entrance to the nostril was obstructed by a fold of hypertrophied mucous membrane, as in the former case, but here it was bright red in colour and eroded on the surface, so that it bled freely on being pushed aside by the probe. The nasal cavity was filled throughout by the same foul-smelling, cheesy material. After clearing this out, and snaring the hypertrophied mucous membrane, all the symptoms disappeared under the use of an alkaline and antiseptic nasal wash. There was no dead bone nor ulceration inside the nose, beyond the superficial erosion already referred to.

Both the above cases have been examined by me quite recently, and remain free of any painful symptoms or disagreeable discharge.

The sequence of events in the above cases appears to have been as follows: An acute nasal catarrh, extending to one of the accessory cavities, most probably the frontal sinus, with swelling and inflammatory hypertrophy of the mucous membrane, leading to gradual occlusion of the

nostril and retention of the discharge, which gradually filled the nasal cavity, became inspissated, and, through pressure, gave rise to pain and deformity. Disease of the antrum is excluded by the cessation of all symptoms after the removal of the obstruction.

THE EUSTACHIAN BOUGIE.

By W. ROBERTSON, M.D., Surgeon Throat and Ear Hospital,
Newcastle-on-Tyne.

I AM bound to say, from all I hear and read, that this is a much neglected and abused instrument, and will certainly come into more frequent use, notwithstanding that (*pro tem.*) English and American aurists have come to discontinue its employment. The obvious reason for this is no doubt the fear of laceration of the mucous membrane of the Eustachian tube, and the subsequent aerocele developed in neighbouring parts, or the development subsequently of otitis media purulenta. Such results have happened, and are recognized. These, however, have occurred where Politzer's bag has been employed to subsequently douche the tube after the use of the bougie.

The following detail of what I have found to be invariably a perfectly harmless method of using the Eustachian bougie may form the basis of remarks. Premising of course that there is no inflammation of the middle ear, no redness round the margins of the drum, or red streaks down the handle, and that the case is otherwise suitable—no adenoid growths, Eustachian synechiæ, etc.—the nares and post-nasum are gently irrigated with a mild carbolic lotion. An Eustachian catheter (Continental form) is introduced, and Lucae's air douche is used (with Hartman's insufflation capsule attached, filled with granules, composed of menthol, iodine, and camphor) to inflate the ear, the otoscope being used to determine results. The air douche is now detached, and a two per cent. solution each of cocaine and resorcin in distilled water (a few drops) is injected into the catheter, and blown up into the tube by the air douche. The bougie, well cleansed and marked to protrude about two centimètres beyond the beak of the catheter, is now carried up the tube; its arrival *in situ* being recognized by means of the otoscope by a gentle click. The bougie is left *in situ* for ten minutes or so, and withdrawn, and Lucae's air douche is applied with perfect confidence. In common with others, I suppose, I have to record mishaps after the use of the bougie when I employed Politzer's bag subsequent to the withdrawal of the bougie. In some way or other abrasions of the tubal mucosa must have been effected and allowed entrance of air (to surrounding parts, down the lateral wall of pharynx and in front of the epiglottis, etc.) driven too forcibly by means of Politzer's bag. Since the disuse of Politzer's bag, and under the same circumstances, I have had no accident to record since adopting Lucae's air douche instead. With this reservation, I have no hesitation in saying that with ordinary precaution the procedure is devoid of risk. After extensive experience, such has been the case in my own practice. A

point to be observed is to observe caution just as the bougie is about to enter the tubal ostium, for here it is that the point of the bougie is apt to catch in folds or recesses of the tube. Once past this region, somewhat more force may be used, especially when the bougie becomes engaged in the stricture, the sensation of which soon becomes evident to the experienced operator, who as well readily recognizes the moment when the bougie has reached beyond. In such cases (where the stricture is highly developed) the subsequent use of the air douche, after withdrawal of the bougie the ear welcomes a free ventilation of the *cavum tympani*. To dwell upon such a case for a moment (*i.e.*, a case of stricture of the Eustachian tube), the otoscope and the air douche reveal but a scanty, thin stream of air passing into the middle ear. After the use of the bougie, which in its passage generally meets with a stricture, a full stream of air is now heard, while the patient generally at once recognizes the benefit of the procedure.

Much benefit, of course, is not to be expected where there exists ankylosis of the ossicles or fixation of the stapes in the oval window. Where, however, the major part of the lesion rests in stricture of the tube, no matter how determined, great benefit ensues.

With due precautions (antiseptic, etc.) the process can be repeated every second day during a period of three weeks, when the parts are allowed to rest and results observed.

I know of no other way by which strictures of the tube can be as safely overcome. I can only refer to electrolysis and the introduction of silvered catgut (Politzer) as means but to condemn them as pernicious and dangerous. Invariably they lead to otitis media purulenta.

The bougie generally used is made of celluloid, and in Vienna goes by the name of "Urbantschitsch's bougie." Urbantschitsch, I may state, is an enthusiastic supporter of the procedure, and he tells me he has not had one unfavourable result of its use in twelve years' experience in a large *clinique*.

The stricture is no doubt due to proliferation of the adenoid tissue of the tube, and met with oftenest midway in its course.

The mere employment of the bougie in a case suitable will not of course exhaust all the measures required. The many other possibilities in nose, post-nasum and pharynx will demand equally rigid scrutiny and treatment.

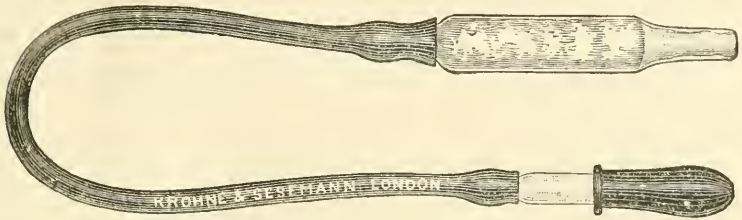
To sum up. Before determining to use the bougie see that no acute or sub-acute process is going on in the middle ear; at no stage of the procedure use Politzer's bag, but throughout only Lucae's air douche, supplemented with Hartman's capsule, filled with some volatile antiseptic. Previous irrigation of nose and post-nasum with some mild antiseptic lotion cannot be omitted with safety.

THE EUSTACHIAN SELF-INFLATOR.

By DUNDAS GRANT, M.D., F.R.C.S. Eng.

THE contemplation of an instrument proposed for douching the nose according to Pin's method, led me to think that the same principle might be applied to the inflation of the tympanum by the patient's own effort.

My instrument consists of an india-rubber tube of moderate calibre (about five-sixteenths of an inch) and about fourteen inches in length. At one end is a glass mouth-piece with a bulb in which is placed some cotton wool; at the other is a short glass tube, on which is placed an india-rubber teat to fit the nostril. If the nose-piece be plugged into one nostril,



while the other is closed, the patient has only to blow forcibly through the glass mouth-piece (puffing out the cheeks so as to insure the blocking of the naso-oral communication by the soft palate) when the expired air will enter the Eustachian tubes, if pervious, and inflate the tympanum.

It is found, however, that chloroform vapour passes more readily than pure air, and I therefore place a few drops (five) of diluted chloroform (chlorof., ether. acet., aa ʒiiss. spir. vin. rectif. ad ʒi.) on the cotton wool in the bulb. After blowing through the instrument once or twice till the extreme pungency passes off, the patient drives the chloroform-laden air up his nose, and after a little practice makes it "go to the ears" with *very little effort*. I have been surprised at the beneficial results following this simple treatment, and I am inclined to think that they are due to the fact that the minimum of pressure compatible with inflation of the tympanum is employed. What is required is ventilation, not distension; an intra-tympanic pressure equal to the atmospheric, not overwhelmingly greater. Politzer's method is apt to over-step the mark, and I have found the method I describe improve the hearing where Politzerization utterly failed. The same objection does not hold good equally against the catheter, which admits of much gentler inflation. Another advantage is that patients can with my instrument practise the gentle inflation repeated at short intervals for a limited time, which is so much more efficacious than the violent weekly inflation, which falls to the lot of many sufferers from aural catarrh. The intelligent use of the self-inflator night and morning for a week or a fortnight will clear up the diagnosis and prognosis in many doubtful cases.

To limit the pressure entirely or partially to one ear, the head must lean on the opposite shoulder with that opposite ear plugged.

The *Lancet* (December 19, 1891) calls attention to a paper by Loewenberg published last year in the *Deutsche Med. Woch.*, insisting on the injurious effect of forcible inflation in sclerosis of the middle ear. In this Loewenberg is quite in accord with me, and his dicta encourage me in recommending the Eustachian self-inflator, which Messrs. Krohne and Sesemann have made for me.

THE PNEUMATIC SPECULUM *as a routine instrument* is, we believe, less constantly in use than it ought to be. One reason was originally the unsatisfactoriness of the suction exercised by means of a tube in the observer's mouth. This objection, however, holds good no longer on the adaptation of a powerful exhausting rubber ball, or a pump of some sort. The writer uses the former. Another objection is the difficulty in fitting the extremity of the ordinary model into all meatuses; even the smallest is often too large for average ears, and the round shape is frequently unadaptable to the oval meatus. This is partially remedied by slipping a small piece of thin india-rubber tubing over the speculum, but a better plan is to warm the vulcanite ear-piece of the speculum over a lamp, having previously smeared it with oil, and then to mould it to an oval shape. Smaller ear-pieces than those usually supplied may be necessary.

Its *diagnostic use* is chiefly two-fold; namely, to detect—(1) the degree of tension of the membrane; (2) the degree of mobility of the ossicles.

(1) The tension of the membrane may be almost entirely lost, and we may have the "*relaxed membrane*" recognizable by its moving like a piece of goldbeater's skin under the action of the suction speculum. (In such a condition inflation of the tympanum is contra-indicated, and the collodion or other treatment called for.) The membrane may be "tacked down" at one or more spots by adhesions, and this can only be satisfactorily recognized by the same speculum.

(2) The *mobility of the ossicles* is frequently interfered with by adhesive inflammatory conditions residua. In many cases immobility of the malleus may be revealed by the exhausting speculum, allowance being made for the apparent fixation present when the membrane is so relaxed as to move without drawing the malleus with it. (Repeated compressions and exhaustions by means of the speculum often "mobilize" the malleus to a considerable extent, and markedly improve the hearing.)

Many side-uses of the speculum will suggest themselves. Thus the magnified view afforded by the instrument is much appreciated by the presbyopic otologist. Again, collections of pus in the recesses of the middle ear may, with a little dexterity, be sucked out by means of this instrument. It also enables us to practise Gellé's experiments on hearing for a tuning-fork in contact with the head (see last year's Annual), to test the effect of positive or negative pressure and of blowing into the meatus in cases of tinnitus aurium, in many of which no remedy, however empirical, is to be despised.

We cannot too strongly impress upon learners the necessity for accustoming themselves to the use of the pneumatic speculum as an indispensable diagnostic appliance, and a therapeutical aid of considerable use. Many cases have come under our observation in which continued tympanic inflation has made matters worse, relaxation and atrophy of the membrane having been overlooked owing to neglect of the use of the Pneumatic Speculum as a routine practice.

THE VALUE OF SPECIALISTS.—In the preliminary part of a paper read before the Vermont State Medical Society, Dr. O. B. DOUGLAS makes some remarks which, though somewhat trite in idea, convey, in a fairly fresh and concise manner, a truthful aspect of the case for specialists, which is worthy of attention. He says :—"All physicians "cannot be specialists ; the opportunity does not come to them to "study a large number of similar cases. But in densely-peopled "sections—our large cities—it is difficult to prevent specialism. A "successful treatment of what the patient considers a serious case is sure "to be spoken of among his friends, resulting in a new crop of patients "with similar troubles. And, struggle as one may against it, he awakens "to the fact that he is a specialist, treating largely a certain class of cases, "the tendency being ever to narrow the field of operations and the "operator. Good men struggle against this tendency, and, *learning "something from each specialist—and much from them all*—grow broad "and mighty in mind and practice. They show their wisdom not in "studying special departments less, but in studying all departments "more."

This is a fitting corollary to the propositions laid down by Mr. LENNOX BROWNE, in his Presidential Address before the British Laryngological and Rhinological Association, in combating the tendency of some general physicians "to ascribe impairment of the senses of sight, hearing, and "smell, of speech, and, for all I know, most other disorders of function, "to neurasthenia, and to assert that numbers of these cases get well "without treatment. . . . No man is in a position to make such "sweeping statements, unless he is an expert in the respective technical "methods of examination, and has exhausted every special means of "diagnosis."

The general physician who has made his name, and those who ape him, would do well to shun the mental attitude of personal finality, and, instead of shutting their eyes to the work of specialists and taking refuge behind an owl-like appearance of greater wisdom than any man ever possessed, watch keenly and critically and, according to their lights, learn from those whom they affect to despise.

To specialists, at the same time, must be recommended a spirit of judicious receptivity, as distinguished from interested credulity, in order that they may worthily fill the place we have desiderated for them, lest from what they are pleased to consider crystallization they lapse into fossilization, and become unfit to follow, far less to lead.

NEW INSTRUMENTS, THERAPEUTICS, DIPHTHERIA, &c.

Cousins, J. W. (Portsmouth). — *New Nasal Clamp Forceps*. "Brit. Med. Journ.," Nov. 21, 1891.

A DESCRIPTION, with illustrations. Made by Arnold and Sons, West Smithfield. *Hunter Mackenzie.*

Vulpus (Erfurt). — *Description of a New Nasal Cautey*. "Archiv. für Ohrenheilk.," Bd. 32, Heft 3 and 4.

A CRESCENTIC piece of platinum wire, of about 2·5 centimètres in length and 0·4 millimètres in thickness, is attached to the free ends of two thicker copper wires (1·2 millimètres thick and 11 centimètres long). These free ends diverge and the proximal ends converge to a suitable galvano-cautey handle, being bent to a convenient angle for nasal purposes. It is easily seen how such an arrangement of wire can be passed over any projecting body, and made to burn its way through it by short repeated closings of the circuit. *Dundas Grant.*

Szolorski (Heidelberg). — *Application of Trichloroacetic Acid in the Nose and Pharynx*. "Münchener Med. Woch.," 1891, No. 46.

DESCRIPTION of a probe for application of this drug. *Michael.*

Bürkner (Göttingen). — *Aristol in Aural and Nasal Diseases*. "Zeitschrift für Therapie," Bd. 9, No. 15.

IN cases of ozæna, rhinitis chronica, and nasal syphilis, the author has applied insufflations of aristol with best results. *Michael.*

Szoldrski (Heidelberg). — *On the Use of Creosol Iodide in Diseases of the Nose, Pharynx, and Larynx*. "Münchener Med. Woch.," 1891, No. 43.

INSUFFLATIONS of the new medicament are very useful in cases of hypersecretion of the mucous membrane, and as after-treatment in operations in the nose and pharynx. *Michael.*

Yeo, Burney (London). — *On the Conditions of the Cure of Consumption*. "Brit. Med. Journ.," Nov. 14, 1891. Med. Soc. of London, Nov. 9, 1891.

THE therapeutical indications are (1) suitable food in suitable quantities and in suitable form, to promote assimilation: (2) residence in a dry aseptic atmosphere, in the country or by the sea-side, equable in temperature but not necessarily cold: (3) repeated counter-irritation: (4) internal medication. Antiseptic inhalations systematically used were beneficial. The hypophosphites did most good in young, light complexioned patients. Dr. F. de Haviland Hall spoke highly of copaiba resin in cases of catarrh with profuse expectoration.

Hunter Mackenzie.

Loewenstein (Elberfeld).—*Europhen in Nasal Diseases*. "Therap. Monats.," 1891, No. 9.

THIS new preparation of iodine was applied by the author in some operative measures in the nose; he was content with its styptic and antiseptic powers.

Michael.

Coghill, J. G. Sinclair (Ventnor).—*Observations on the Effect of the Injection of Tuberculin on the Pulse*. "Brit. Med. Journ.," Nov. 14, 1891.

THIS paper, which was read in the section of therapeutics at the Annual Meeting of the British Medical Association, 1891, is illustrated by a series of sphygmographic tracings, which show, as stated by the author, that the effect of the inoculation of tuberculin is simply that produced by ordinary pyretics.

Hunter Mackenzie.

Skerritt, E. Markham (Bristol).—*On the Use of Tuberculin in the Treatment of Lupus and Tuberculosis*. "Brit. Med. Journ.," Nov. 14, 1891.

A PAPER read in the section of therapeutics at the Annual Meeting of the British Medical Association, 1891. Two cases of tubercular disease of the larynx manifested improvement under treatment, whilst a case of extensive lupus of the face and hands, and bacillary phthisis of both lungs, had a severe laryngeal reaction after the fourteenth injection. This extended to ulceration and necrosis, followed by improvement. In no instance of purely pulmonary phthisis, when the throat was healthy before injection, did mischief arise during treatment. The author concludes by saying: "In some cases it may be fairly concluded that tuberculin has done decided good; in others, that it has been negative in its effects; and again, in others, that it has probably been harmful. As to the selection of patients for treatment, provided that very advanced cases are excluded, the experience obtained by careful observations during the past seven months has thrown no light upon the subject, and my colleagues and I are still absolutely at a loss for data to determine beforehand what are and what are not suitable cases for treatment with tuberculin."

Hunter Mackenzie.

Robertson, R. (Ventnor).—*Treatment of Consumption by the Hypodermic Administration of Guaiacol and Iodoform*. "Brit. Med. Journ.," Nov. 14, 1891.

A PAPER read in the section of therapeutics at the Annual Meeting of the British Medical Association, 1891. The author believes that this treatment is of advantage in reducing the fever, in diminishing the expectoration, and in modifying the cough. It is without risk, with ordinary precautions. It does not prevent the outbreak of other tuberculous outbreaks.

Hunter Mackenzie.

Beretta, C. (Paris).—*On the Use of Dog's Serum in the Treatment of Tuberculosis*. "Brit. Med. Journ.," Nov. 14, 1891.

READ in the section of therapeutics at the Annual Meeting of the British Medical Association, 1891. As the outcome of a series of researches in Paris by Professor Charles Richet, it was found that in about one-third of tuberculous patients treated by dog's serum no result was produced. In the other two-thirds a real improvement was observed.

The author sums up thus : "Dog's serum, in men as in animals, does not seem to have a special curative action against tuberculosis, but it possesses a powerful action, if not against the microbe, at least against its effects. It seems to act as a powerful tonic, and indirectly, by improving the general nutrition, puts the patient in a better condition to overcome his terrible disease. The blood of steers and the serum of sheep seem to give similar results." He also refers to its good effects in syphilis, chronic malaria, and anæmia. [Prof. McFadyean, Edinburgh, affirms ("Brit. Med. Journ.," Nov. 28, 1891) that tuberculosis is by no means rare in the dog.]

Hunter Mackenzie.

Schrevens (Tournay).—*On the Method of Propagation of Diphtheria. A General Plan of Enquiry.* "Séance de la Société Beligiques de Med. Publique," Oct. 25, 1891.

1. The contagion of diphtheria is carried in schools not only by diphtheritic patients themselves, but by their relatives (brothers and sisters). These should therefore be excluded from the schools.

2. Disinfection should be practised after visiting a diphtheritic patient.

3. There is danger in placing the brother or sister of a diphtheritic patient (whom it may be desired to remove from the infected spot) in another family, since they too often carry the germs of the disease.

4. The disease is propagated through objects which have been in contact with the diphtheritic patient. A striking example has occurred in Schrevens' experience. A scarf made by a diphtheritic patient was given to a woman, and the disorder was transmitted to her two children, who died fifteen days later from it.

5. The diphtheritic microbes and spores have a very great vitality. Thorough and energetic disinfection should therefore be practised (sulphur, heat, and especially the hot air oven).

6. It is necessary to extinguish infected nuclei. To accomplish this the principle of compulsory notification must be enforced and the physician should be protected by a law which releases him from professional secrecy.

7. The cause of the propagation of the disease and the origin of epidemics is the fouling of the surface of the sore by sewage, the overflowing of cesspools, and the various animal refuse.

8. The reappearance of diphtheria in houses is especially observed in low-lying, badly-lighted, and ill-ventilated habitations.

In the discussion following the reading of this paper,

Dr. DESGUIN (of Anvers) asked how could the circumstance be explained, which he had observed in the north of the province of Anvers, of the disappearance of endemic intermittent fever, when diphtheria, up to then unknown in the district, invaded it? Was there any antagonism of the microbes or metamorphism?

Hicquet.

Baginsky, Adolf (Berlin).—*Etiology of Diphtheria—Loeffler's Bacillus.* "Archiv. für Kinderheilk.," Bd. 13, Heft 4, 5, and 6.

In 95 cases of diphtheria, Loeffler's bacillus was found in 68 cases, equal to 73 per cent. Of these 68 cases, 27 died, and also the surviving had very grave forms, and consequent paralysis. Of the 25 cases in which the

bacilli were not found, but which macroscopically made the impression of true diphtheria, only one died ; all the others were only a short time ill. The author concludes that there are two similar diseases, which can only be found out by bacteriological examination. In two cases of diphtheria scarlatinosa Loeffler's bacillus was not found. A third had firstly diphtheria, and some days later scarlet fever. Here the bacilli disappeared as the scarlet fever began.

Michael.

Tangl (Tübingen).—*Studies on Human Diphtheria*. Baumgarten's Arbeiten aus dem Pathologischen Institut in Tübingen, 1891.

BACTERIOLOGICAL researches, by which the Loeffler bacillus is proved with certainty to be the etiological cause of human diphtheria.

Michael.

Packman, A. (Rochester).—*Notes of a Case of Diphtheria : Tracheotomy—Recovery*—"Brit. Med. Journ.," Nov. 7, 1891.

A PAPER read and discussed, but not reported, before the South-East Branch, West Kent District, British Medical Association, Oct. 29, 1891.

Hunter Mackenzie.

Baginsky, Adolf (Berlin).—*Diphtheritic Paralysis*. "Archiv für Kinderheilk.," Bd. 13, Heft 4, 5, and 6.

IN thirty cases of diphtheritic paralysis, the author has observed three types. (1) Early appearance and paralysis of the palate, often combined with neuritis. (2) Paralysis later on, and this without marked sepsis or gangrene. Here paralysis of diaphragm is most dangerous. This form is characterized by complete aphonia, cough, dyspnœa, thoracic respiration, and complicating broncho-pneumonia or sudden asphyxia. (3) Of great importance during course may be only weak pulse ; sometimes affection of heart ; precordial pain ; weak sounds of heart with quickening ; great swelling of the kidney often takes place, and is very fatal. Different forms are illustrated by cases.

Michael.

Arnheim (Berlin).—*Anatomical Researches on Diphtheritic Paralysis*. "Archiv für Kinderheilk.," Bd. 13, Heft 4, 5, and 6.

IN eight *post-mortem* examinations of death in children from diphtheria, with paralysis, the author has examined the nerves and muscles, and has found (1) hyperæmia and capillary hæmorrhages in the nerves of the medulla oblongata ; (2) inflammatory processes in the muscles ; (3) parenchymatous and interstitial degeneration of the nervous fibres. The disease, therefore, is characterized as neuritis parenchymatosa et interstitialis proliferans.

Michael.

Strelitz (Berlin).—*Bacteriological Researches concerning the Pneumonias arising during Diphtheria*. "Archiv für Kinderheilk.," Bd. 13, Heft 4, 5, and 6.

IN eight bacteriologically examined cases, the following micro-organisms were found, either isolated or in combination : (1) the diplococcus Fraenkel, Weichselbaum, (2) staphylococcus pyogenes aureus et albus, (3) streptococcus pyogenes, (4) Friedländer's bacillus, (5) diphtheria bacilli. The diplococcus is found in the most cases and must be viewed as markedly etiological, but the other micro-organisms can also produce inflammatory effects in combination.

Michael.

Goris.—*Note on the Treatment of Diphtheria.* "Presse Méd. Belge," 1891, No. 49.

THREE cases of slight diphtheria treated by the galvano-cautery are described. The temperature fell the day after the cauterizations, and the scars were detached five days after. The affection did not extend, and cure was complete. *Hicquet.*

Baginsky.—*Therapy of Diphtheria.* "Archiv für Kinderheilk.," Bd. 14, Heft 1.

THE author has tried a great many medicaments, but he has had the impression that we have not any medicament which can be said to be specific. He has also tried, analogous to Koch's experiments, injection of extracts of diphtheria bacillus, without any effect. The mortality of diphtheria in his hospital has been forty per cent., and, after subtraction of cases beyond hope before they came, twenty-five per cent. *Michael.*

Verstracken.—*Some Practical Considerations on Croup.* "Annales de la Soc. de Méd. de Gand," Sept. and Oct., 1891.

THE author considers that the two affections, diphtheria and croup, are only varieties of one and the same disorder. After some considerations upon the symptomatology and etiology of the affection, he deals with the therapeutics, which he divides under two heads, prophylactic and curative. Diphtheria being oftenest contracted at school, he advises isolation of sick children, and those who live where there is diphtheria. Disinfection of the houses, furniture and clothing is to be performed. A general tonic treatment is recommended. Locally, applications of five per cent. aqueous solution (rendered slightly alcoholic) of phenic acid are to be made. If the affection extends to the larynx, tracheotomy is called for. *Hicquet.*

Waxham, F. E. (Chicago).—*Diphtheritic Croup at the Age of Sixty Years.* "North American Practitioner," Vol. III, No. 9.

A LADY, aged sixty, was attacked with diphtheria. Difficulty of breathing was great, and Dr. Waxham was summoned to perform intubation. As soon as the tube was inserted, respiration was at once arrested, membrane having been pushed down in front of the tube. After waiting a moment, the tube was withdrawn, and an expulsive cough followed, expelling a membranous exudation, which was a whole cast of the trachea. Respiration becoming normal, and the patient being comfortable, there was no occasion to reintroduce the tube. Four days afterwards the patient died from pulmonary obstruction. *R. Norris Wolfenden.*

Sattler (Heidelberg).—*Result of Tracheotomy in Croup and Diphtheria.* "Beitrag zur Klin. Chirurgie," 1891, page 8.

REPORT on 156 tracheotomies with 80 = 51 per cent. cures. *Michael.*

Aronson (Berlin).—*On Intubation in Diphtheritic Laryngeal Stenosis.* "Archiv für Kinderheilk.," Bd. 13, Heft 4, 5, and 6.

OF fifteen cases treated with intubation, two were cured; one of these had tracheotomy performed afterwards, so that only one was cured by

intubation alone. Because feeding is very inconvenient, the method of intubation was given up for treatment of diphtheria. Of three cases of stenosis following diphtheria, twice it was possible to remove the canula by intubation; in the third case removal was impossible. *Michael.*

Rause.—*Intubation in 1890 and 1891.* "Münchener Med. Woch.," 1891, No. 40. COLLECTIVE investigations in 326 cases of primary diphtheria, with 139 cures, equal to 42 per cent. Of those cases in which tracheotomy had ultimately to be performed, six got all right out of 83 cases—equal to 7 per cent. In 17 cases of secondary there were five cures, equal to 29 per cent. For primary diphtheria, in 220 cases where tracheotomy was performed 72 cures resulted, equal to 32·5 per cent. In secondary diphtheria, 16 cases, with six cures, equal to 37 per cent. *Michael.*

Ullmann (Berlin).—*Observations on Whooping Cough.* "Archiv für Kinderheilk.," Bd. 14, No. 1.

IN the Friedrichskrankenhaus the author has treated a great many cases with bromiform, but he has not gained the impression that the medicament had any great influence, and does not believe that a specific against the disease will be easily found. *Michael.*

NOSE AND NASO-PHARYNX.

Douglas, O. B. (New York).—*The Upper Air-Passages, and their Diseases.* "Med. Record," December 12, 1891.

DR. DOUGLAS considers traumatism to be the cause of more catarrhal troubles than all other causes put together. He quotes Bosworth's views as to deformities of the nasal septum being probably the most frequent of all exciting causes of catarrh, and adds that certainly the most frequent causes of the deformities are traumatic. It is not necessary that there should be occlusion, and every deflection does not cause catarrh. The necessity of free drainage and an open respiratory tract is unquestioned; but, in many cases, little "points of contact" are found to be the cause of great trouble. Catarrh causes contact, but contact also causes catarrh. At points of contact secretions are retained, and become acrid. The most common situation for injurious contact is between the middle turbinated body and the septum, and he advised that just sufficient tissue should be removed to prevent it. With regard to applications of remedies to the upper air-passages, detergent or antiseptic, the great point is that they should be sufficiently pleasant and easy to use, for the patient to repeat them at very short intervals.

Dundas Grant.

Grunwald (München).—*Contribution to the Surgery of the Upper Air-Passages.* "Münchener Med. Woch.," 1891, Nos. 39 and 40.

A PATIENT, forty-six years of age, suffered from a purulent discharge from the frontal bone, and a foetid secretion of the nostrils. Evidence

of syphilis could be found in the mucous membrane. Iodide of potash was given internally, and an opening made into the bone, where a sequestrum was found.

A patient, fifty-one years of age, suffered from polypi of the nose with empyema of the frontal sinuses and antrum of Highmore. In both trephining was successful. *Michael.*

Lazarus.—*Reflex Action of the Nasal Mucous Membrane upon the Lumen of the Bronchi.* "Archiv für Anat. und Physiologie" (Physiol. Abtheil.), 1891, Heft 1 and 2.

THE author has tracheotomized rabbits, and has applied an ingenious apparatus for determining the pressure in the bronchi. The animals are curarized and the mucous membrane of the nose then irritated. By irritation he produced increase of the pressure in the bronchi. After cutting the vagi the pressure did not increase. This pressure could only be produced by decreasing the lumen of the bronchi. *Michael.*

Siebenmann (Basel).—*A Model of the Pneumatic Accessory Cavities of the Nose.* Festschrift zu Ehren des Herrn Prof. Kocher in Bern, 1891.

DESCRIPTION of the model made by the author and some practical remarks. *Michael.*

Lubliner (Warsaw).—*Case of Rhinoscleroma—Typhus Exanthematicus (Disappearance of the Rhinosclerum Infiltration).* "Berliner Klin. Woch.," 1891, No. 40.

A PATIENT, thirty-five years old, with rhinoscleroma of the left side of the nose. A piece of the neoplasm was extirpated with the cold wire, and the diagnosis confirmed by microscopical examination. Some days after the operation the patient developed typhus. Six weeks after the cure of the disease the nasal infiltration disappeared. Also in cases of lupus and gummata absorption of the neoplasms was observed during intercurrent acute infectious diseases. *Michael.*

Reinhold (Würzburg).—*Myxo-Sarcomata of the Nose.* "Internat. Klin. Rundschau," 1891, No. 44.

(1) A GIRL, sixteen years old, had a solid red tumour in the left naris. Extirpation of the tumour was effected after incision of the nose and temporary resection of the left nasal bone. Cure resulted. The microscopic examination showed that the tumour was a myxo-sarcoma. No recurrence.

(2) A girl, twenty-three years old, had a pale red tumour on the left side of the septum. Extirpation with the cold wire was followed by cure. No recurrence. The microscopic examination showed it to be myxo-sarcoma. *Michael.*

Demme (Berlin).—*Ozena.* "Deutsche Med. Woch.," 1891, No. 46.

Compare the report in this Journal. *Michael.*

Watson, W. Spencer (London).—*Nasal Polypus.* "Brit. Med. Journ.," Nov. 28, 1891. Med. Soc. of London, Nov. 23, 1891.

THE history was related of the case of a girl, aged seventeen, who for

two years had been the subject of nasal polypus, which hung from the left nostril into the naso-pharynx, and could be seen behind the uvula.

Hunter Mackenzie.

Leeman (Brussels).—*Two Cases of Fibrinous Rhinitis*. “*Annales de la Soc. de Méd. de Gaud.*,” Sept., 1891.

THE title indicates the nature of the cases. Nothing new. *Hicquet.*

Schiffers (Liège).—*Case of Rhinolith*. Soc. Méd. Chirurgicale de Liège Meeting, Oct. 1, 1891.

A LARGE calculus in a woman of forty years of age had existed for several months, and had produced a malformation of the nose, and marked swelling in the region of the right maxillary sinus, with discharge of very foetid pus, and cephalalgia of the same side. The calculus was extracted in two portions.

Hicquet.

Wodon.—*Complete Occlusion of the Naso-Pharyngeal Cavity*. “*Presse Méd. Belge.*,” 1891, No. 43.

THE occlusion in this case was the result of cicatrices after syphilitic ulceration.

Hicquet.

Binnie, J. F. (Kansas).—*Fibro-Myxoma of the Naso-Pharynx*. “*Med. News.*,” Nov. 7, 1891.

A BOY of eleven had a tumour two inches long removed from the naso-pharynx by forceps. It quickly grew again, and continued to increase until it occupied the pharynx, and pushed the palate forward and upward. It was removed by the Jarvis snare. During the operation intubation had to be performed with a gum elastic catheter in consequence of dyspnœa. After removal the growth measured $2\frac{1}{2}$ by $1\frac{3}{4}$ by $1\frac{1}{4}$ inches, and was egg-shaped. It was a fibro-myxoma, and arose “from the point where the nasal mucous membrane merges into the post-nasal.”

A year after the growth had recurred, the right nostril being filled with a greyish mass far back, and the naso-pharynx filled with a dense mass, apparently springing from the lower turbinated. It was removed with a Volkmann's spoon, and was of size almost identical with the first growth.

R. Norris Wolfenden.

Chiari (Wien).—*The Diseases of the so-called Bursa Pharyngea*. “*Wiener Klin. Woch.*,” 1891, No. 40.

In three thousand patients the author has found only eight cases of disease :—(1) A patient, twenty-nine years old, with chronic atrophic rhinitis, who also had an ulcer three mm. deep ; touching with nitrate of silver this disappeared, but the rhinitis is still there. (2) A patient, thirty-five years old, with ozæna, always expectorated dry foetid pieces from the retro-pharynx. The author found in the naso-pharynx a little opening ; after having destroyed it by painting, the case was cured. (3) A patient, twenty-five years old, had nasal obstruction and masses of mucus in the naso-pharynx. It was possible to enter here one cm. with the probe ; cure by same process. (4) A patient, forty years old,

with obstruction of the nose, had a furrow four mm. long in the same spot in the naso-pharynx. Here the probe could enter five mm. ; discharge of mucus. (5) A patient, thirty-three years old, complained of the feeling of a foreign body in the naso-pharynx. After removing the mucus from the spot in the naso-pharynx, a little opening was seen. The probe could enter three mm. (6) A patient, twenty-three years old, complained of discharge of mucus from the naso-pharynx. There was a little opening in which the probe could enter five mm. Extirpation of adenoid vegetations and painting cured patient. (7) A patient, twenty-three years old, had a deep sacciform opening in the naso-pharynx and discharge of mucus. Cure by operation. (8) A patient, nineteen years old, had a yellow fluctuating tumour on this spot in the naso-pharynx. Incision ; cure.

Michael.

Wroblewsky (Warsaw).—"Internat. Klin.," 1891, Nos. 41 and 42.

IN 160 cases of persons deaf and dumb 57·5 per cent. had adenoid vegetations.

Michael.

Zarniko (Berlin).—*Mycosis Aspergillica in the Antrum of Highmore.* "Deutsche Med. Woch.," 1891, No. 44.

A PATIENT, fifty years old, complained of a bad smell from the nostrils for some months. She had specific cicatrices on the palate and nasal polypi. After removing the polypi the author performed irrigations of the left antrum of Highmore. In the fluid removed were some dark pieces of the size of a pea. The microscopical examination showed that the masses consisted of aspergillus fumigatus. Cure after twenty-one injections. A similar has not been described.

Michael.

Steinthal (Stuttgart).—*Treatment of Empyema of the Frontal Sinus.* "Würtemberger Med. Correspbl.," 1891, No. 31.

A PATIENT, forty years old, had had headache irradiating from the right orbit during a year, which commenced with a coryza. On the right orbital wall a small fistula was found discharging foetid pus. On the other side a similar fistula existed. Through both fistulae rough bone could be felt with a probe. Incision and resection of a piece of bone on both sides with enucleation of the mucous membrane was performed. Discharge of foetid pus. Iodoform tampon made improvement. A total cure only followed after other more extensive operations were performed on both sides, combined with drainage of the nose.

Michael.

MOUTH, TONGUE, PHARYNX, &c.

Masters, J. A. (London). } *Black Tongue*. "Brit. Med. Journ.," Nov. 14, 1891
Smith, I. A. (London). }

TWO instances of this are reported. In one case, the black patch disappeared spontaneously in about three weeks, and in the other it disappeared in a few days after the use of a mixture of nitric acid and nux vomica, and a mouth-wash of lemon-juice and water. No cause was detected.
Hunter Mackenzie.

Körner (Frankfurt-a-M.).—*Enuresis Nocturna and Mouth-Breathing*. "Centralbl. für Klin. Med.," 1891, No. 23.

THE author has observed two cases of combination of these two anomalies.
Michael.

Felsenthal (Berlin).—*Report on the Internal-policlinic of the Friedrichkrankenhaus in the years 1890-91*. "Archiv für Kinderheilk.," Bd. 14, Heft 1.

(1) *Congenital macroglossia* was observed in a child two years old, combined with congenital hypertrophy of the muscles and malformation of the root of the nose, and cretinism. (2) *Emphysema of the skin* arose from laceration of a tuberculous ulcer of the right bronchus during an attack of whooping cough in a child two and a half years old. (3) *Congenital goitre*, in the form of a tumour of the size of a walnut, giving the feeling of a soft cyst sitting on both sides of the neck, was observed in a girl twenty-five days old.
Michael.

Mandelstamm (Kiew).—*Pemphigus of the Mouth, Pharynx, and Larynx*.

THIS disease is recorded by the author. Five times the appearances were not unlike those of diphtheria. Large bullæ covered the mucous membrane, and in only one case was it accompanied by the same thing in the skin. Nothing seemed to be of any use in the way of treatment.
Michael.

Milligan (Manchester).—*Primary Malignant Disease of Tonsil*. "Brit. Med. Journ.," November 28, 1891. Clinical Soc. of Manchester, November 17, 1891.

EXHIBITION of a man, aged forty-nine, the subject of this disease. The tonsil was much enlarged, and a small unhealthy ulcer occupied its centre. The surrounding tissues were infiltrated.

Hunter Mackenzie.

Neumann (Wien).—*Clinical and Pathological Changes in the Tonsils and Palate*. Deutsche Dermatolog. Gesellschaft. Leipzig, 1891.

THE author describes the disease from the beginning, and speaks of the swelling and redness found in the mucous membranes in the earlier stages. The tertiary disease, consisting of ulceration, loss of substance, with hardening of the walls, is fully gone into.
Michael.

White, Digby (Sheffield).—*Fatal Cases of Poisoning by Strong Acids*. "Brit. Med. Journ.," November 28, 1891. Sheffield Med. Chir. Soc., November 19, 1891.

EXHIBITION of specimens from two cases. In the one, the stomach showed five perforations, and death occurred in six and a half hours after strong sulphuric acid had been taken. In the other, the swallowing of strong nitric acid produced excoriation of the œsophagus and larynx, with complete destruction of the stomach. Death ensued in one and a half hours.

Hunter Mackenzie.

Hajek (Wien).—*Pharyngitis Fibrinosa*. "Internat. Klin. Rundschau," 1891, Nos. 40, 41, and 42.

THE author reports some cases to show that a chronic fibrinous pharyngitis may exist without any diphtheritic infection. (1) A patient, thirty-four years of age, became feverish, and suffered from dysphagia. After six days he consulted the author. On the inflamed red membrane white-greenish patches could be seen. These membranes were two millimètres thick. For fourteen days these disappeared and reappeared. Patient got quite well, but stated he had the same affection two years ago. Microscopic examination did not detect any bacilli. (2) A patient, twenty years of age, suffered from difficulty in swallowing. The uvula was covered with a white membrane. These membranes increased within a few days to the epiglottis and tonsils. He got well a few days later. The author believes this patient was also suffering from influenza. No diphtheritic bacilli found. (3) A patient, forty-five years of age, suffering from hoarseness and pain in swallowing, had greenish membranes on the palate and tonsils. Cure in fourteen days. Two months later the same thing occurred. (4) Other two similar cases were observed. In all these the author does not believe that diphtheria existed. [I believe it is not possible to exclude diphtheria with certainty in such cases.]

Michael.

Hochenegg. — *Œsophagoplasty and Total Extirpation of the Larynx*. Gesellschaft der Aerzte in Wien. Meeting, Oct. 30, 1891.

THE patient had a large, hard tumour of the neck, and an epithelioma of the left sinus pyriformis, and a diffuse infiltration of the ary-epiglottic fold and the right side of the pharynx. Tracheotomy was followed by extirpation of the neck tumour, and extirpation of the larynx. A part of the œsophagus also had to be removed because it was also infiltrated. The lateral parts of the skin were then stitched to the œsophagus, so that a new œsophagus was formed. The trachea was sewed to the œsophagus and the anterior skin, so that the space between the trachea and œsophagus was filled up. The new formation of the œsophagus was completed by a plastic operation some months later. As the trachea was stitched to the skin and closed from the mouth an artificial larynx could not be applied. The author, therefore, applied an apparatus, consisting of a drain introduced by the lower nasal meatus, communicating with a balloon containing air, placed on the thorax. The balloon could be compressed by the right arm. It was thus possible for the patient to produce language.

Prof. STÖRK mentioned a similar apparatus applied by him some years ago.

Prof. SCHRÖTTER remarked that often patients without any larynx at all, or with only half a larynx, can produce a whispering voice.

Prof. BILLROTH also has observed a whispering voice in patients with extirpated larynx.

Profs. HOFMÖLLER and HACKER made some remarks concerning œsophagoplasty.

Prof. EISELSBERG showed a patient in whom he had extirpated the larynx some weeks ago for carcinoma. The patient has an artificial larynx.

Michael.

Wilson, T. Stacey (Birmingham).—*Facial Paralysis*. "Brit. Med. Journ.," November 28, 1891. Midland Med. Soc., October 28, 1891.

EXHIBITION of a young woman, the subject of paralysis of the seventh and fifth nerves, probably due to a cerebral meningeal lesion. The author says that a point of interest in the case was that the palate moved perfectly, and that the uvula could be completely retracted without the least sign of paralysis. On the affected side there was distinct impairment of hearing, probably due to paralysis of the stapedius muscle. Taste on the anterior part of the tongue was lost. [As the researches of Vulpeau, Beevor, and Horsley have shown that neither the fifth nor the seventh nerve has anything to do with the motor innervation of the soft palate, it is not surprising that, in this case, neither palate nor uvula showed signs of paralysis. The spinal-accessory is the motor nerve of these parts.—ABTRACTOR.]

Hunter Mackenzie.

Schiffers (Liège).—*Foreign Body in the Œsophagus*. "Annales de la Soc. Méd. Chirurgicale de Liège," 1891, No. 11.

A YOUNG boy of sixteen had swallowed a Belgian two-franc piece, which had become arrested in the upper part of the œsophagus. The only symptom produced was difficulty of deglutition. An unsuccessful attempt was made to extract the coin through the mouth. The "potato cure" was adopted, and on the next day castor oil administered. On the fourth day the coin was discharged in the stools.

Hicquet.

LARYNX, &c.

Wolf (Metz).—*Contribution to the Anatomy and Physiology of the Larynx*. "Deutsche Med. Woch.," 1890, No. 43.

A MAN, thirty years old, noticed crepitation when he moved his head up and down. Objectively the author found abnormal mobility of the thyroid on the cricoid cartilage. Sometimes he believed a little dyspnoea arose. The author believes that there is chronic luxation of the cricothyroid joint. [The same noise, by moving the cartilages with the hand,

can easily be produced in everybody, and there was nothing remarkable in the case.—REP.]

Michael.

Munk.—*Experiments concerning the Superior Laryngeal Nerve of the Horse.* "Archiv für Anat. und Physiologie" (Physiol. Abtheil.), 1891, Heft 1 and 2.

POLEMICAL article, dealing with the papers of Pineles and Exner on the same subject.

Michael.

Padütcheff, Vladimir A. (Ekaterinburg).—*Laryngitis Acutissima (Edema Glottidis).* "Transactions of the Ural Medical Society," 1891, Vol. I., p. 26.

THE author relates a case of a schoolboy of eleven, in whom, during an attack of measles, there rather suddenly developed alarming symptoms of laryngeal stenosis. When brought to the author's hospital, a few hours later, the patient was in a semi-sopororous state, accompanied by cyanosis, almost imperceptible pulse, cold perspiration, and complete aphonia. Without delay tracheotomy (through the crico-thyroid ligament) was performed, and a canula inserted, after which all urgent symptoms gradually subsided. Laryngoscopic examination, made on the next and third day, revealed a most intense œdema of the ary-epiglottic ligaments and epiglottis, the laryngeal introitus being totally closed, and the mucous membrane presenting a dark cherry-red colour. Repeated attempts at removing the canula were followed by attacks of suffocation until the thirteenth day, when the swelling decreased and the tube could be withdrawn. The wound rapidly healed, leaving a small scar. When shown to the Medical Society, four weeks after the operation, the boy was perfectly well in all respects.

The author points out that (1) instances of measles complicated by such severe laryngeal œdema are exceedingly rare; (2) in his patient "exanthematic laryngitis was, probably, accompanied by laryngitis subserosa" [? REP.]; (3) in the course of the last seven years he happened to come across not more than three cases of laryngeal œdema necessitating tracheotomy, the grand total of hospital patients under his care during that period amounting to 11,500. The other two cases referred to patients, aged twenty and twenty-five respectively, in whom the œdema was caused by drinking ice-water, the patients being in an overheated state at the time.

In the course of a discussion which followed Dr. Padütcheff's paper, DR. BORIS I. KOTELANSKY (*ibid.*, p. 22) has communicated two cases of laryngitis acutissima recovering without tracheotomy. In one of them—that of a boy, aged eleven—the laryngeal affection had appeared a week and a half after an attack of measles. In about twenty-four hours there supervened suffocation with cyanosis, etc., the patient's condition becoming apparently hopeless. The boy's parents declining any surgical interference, the treatment was limited to the application of cantharide emplastrum to the neck and inhalations of hot steam, with a two per cent. solution of alum. In about an hour the respiration became free, the patient making a good recovery. The other case was that of an infant with extreme laryngeal obstruction developing in fourteen hours from the first symptoms. The treatment consisted in painting the neck

with cantharide collodion, and inhalations of hot vapours with a solution of perchloride of iron, the result being as strikingly successful as in the former case. *Valerius Idelson.*

Zuffinger (Wien).—*Large Varix of the Left Plica Ary-epiglottica.* "Wiener Klin. Woch.," 1891, No. 41.

A PATIENT, sixty years old, had a blue-red tumour of the left plica ary-epiglottica of the size of a pea. Extirpation by the cold wire. The microscopical examination showed it to be a varix. *Michael.*

Zuffinger.—*Multiple Polypi with Cyanosis.* "Wiener Klin. Woch.," 1891, No. 41.

A GIRL, seven years old, suffering from loss of voice for some months, was found on examination to have a tumour filling the whole sub-glottic space. A small piece was removed, and a number of bacilli found therein.

A patient, sixty-five years of age, suffered from dyspnoea. Latterly there was marked stenosis and dilated veins in the neck. The mucous membrane was dark in colour. On the left vocal cord a red polypus was seen pressing against the right side and almost closing the glottis. Second and third deeper tumours could be made out. Extirpation of these removed the severe symptoms. *Michael.*

Scheinmann (Berlin).—*Treatment of Pachydermia Laryngis.* "Berliner Klin. Woch.," 1891, No. 45.

THE author has applied, with good results, inhalations of physiological solutions of salt and instillations of three per cent. acetic acid. *Michael.*

Grant, J. Dundas (London).—*Papillomata of the Larynx.* "Brit. Med. Journ.," Nov. 21, 1891. Hunterian Soc., Nov. 11, 1891.

EXHIBITION of a girl, aged ten years, from whose larynx papillomata had been removed. *Hunter Mackenzie.*

Waxham, F. E. (Chicago).—*Non-Malignant Growth on Vocal Cord.* "North American Practitioner," Vol. III., No. 9.

A MYXO-FIBROMA, half the size of a buckshot, and situated on the edge of the right vocal cord, was removed by cutting forceps.

R. Norris Wolfenden.

Böttcher.—*Syphilis of the Larynx.* Medicinischer Verein in Kottbus. Meeting, Feb. 1881.

RELATION of two cases without special interest.

Michael.

Strübing (Greifswald).—*Case of Laryngeal Phthisis cured by Tuberculin.* "Deutsche Med. Woch.," 1891, No. 41.

This case is said to have made improvement after forty-three injections of 0·001—0·1 of Koch's lymph. A good portion of the left vocal cord had been destroyed by ulceration. *Michael.*

Williams, Watson (Bath).—*Some Cases of Tuberculous Laryngitis.* "Brit. Med. Journ.," Nov. 7.

A PAPER taken as read before the Bath and Bristol Branch, British Medical Association, Oct. 28, 1891. *Hunter Mackenzie.*

Waxham, F. E. (Chicago).—*Pin in the Larynx*. "North American Practitioner," Vol. III., No. 9.

WHILE holding a pin in the mouth, it had slipped down the patient's throat, and, after coughing violently for a moment, a sharp pain was felt, greatly intensified on swallowing. The pin had fallen head first into the larynx, and the point was driven upwards into the epiglottis. On swallowing a crust of bread, as advised by his doctor, the point was driven deeply into the epiglottis. There was more or less frequent cough, constant pricking in the throat, and difficult and painful deglutition. The patient, a boy of ten, was intelligent, and permitted a careful laryngoscopic examination. The pin was plainly seen with the head directed downward into the glottis, and the point firmly implanted in the tip of the epiglottis. Under cocaine, and with a modified Cusco's forceps, it was extracted with only slight injury to the epiglottis.

R. Norris Wolfenden.

Rauchfuss.—*Intubation of the Larynx*. Deutscher Aerztlicher Verein in St. Petersburg, March 11, 1891.

A RECORD of thirty-five cases of intubation with thirty per cent. of cures. In eight cases tracheotomy had to be resorted to. *Michael.*

Küttner (Berlin).—*The Influence of Tracheotomy on Laryngeal Affections*. "Berliner Klin. Woch.," 1891, No. 35.

A CASE of tubercular ulcers of the larynx and pharynx had been treated with tuberculin and the curette. Dysphagia and dyspnoea followed, and tracheotomy was performed. Laryngotomy was afterwards resorted to, and the galvano-cautery applied. The canula was worn for fourteen days, and three months later there was nothing but cicatrices as residues of the disease. *Michael.*

Baginsky (Berlin).—*On Tracheotomies*. "Archiv für Kinderheilk.," Bd. 13, Glück J Heft 4, 5, and 6.

OF 244 cases of diphtheria at the Friedrich Krankenhaus in Berlin, tracheotomy had to be performed in 68 cases with 23 (34 per cent.) cures. The authors have observed that the cases with ascending temperature after operation gave a worse prognosis, because of complications. Some communicated cases prove this fact. In nearly all cases superior tracheotomy was performed. If there were no asphyxia, chloroform was given. The cricotomy should be made only in cases of great danger, because it causes granulation stenosis, and, if the disease is very severe, sometimes causes necrosis of the cartilages, followed by stenosis, and the removal of the tube is very difficult, as instanced by the following case. Fourteen days after the operation of cricotomy in a little patient, the canula could not be removed. Intubation was tried ineffectually. Necrosis of portions of the cricoid cartilage, with numerous granulations, had occurred. The condition was treated by enucleation of the granulations by means of different forms of dilating canules (Dupius, Stoerk, Bruns), but without effect. Laryngo-fissure was now performed, and the cicatrices extirpated, and the authors hope that the canula can shortly be removed. *Michael.*

Socin (Basel).—*Extirpation of Larynx*. Versammlung des Schweiz. Aertzlich. Vereins, March 31, 1891.

THE author records the case of the total extirpation of the larynx successfully. *Michael*.

Avellis (Frankfurt-a-M.).—*Clinical Contributions on Unilateral Paralysis of the Larynx*. "Berliner Klinik," Heft 40.

OF 150 cases observed in the clinic of Dr. Moritz Schmidt, in 85 cases the etiological cause could be found. It was caused by tubercular infiltration of the lung in 12; by swollen glands of the neck in 7; goitre and its operations in 15; œsophageal tumour caused 5; aneurism caused 24; other causes, 27. In 10 cases the unilateral laryngeal paralysis were combined with paralysis of the palate. The right band was paralysed in 92, the left in 46 cases, both in 12 cases. The second chapter relates a case of virile hysteria, hysterical anæsthesia, deafness, and other anomalies combined with unilateral paralysis of the vocal band. Firstly, a cerebral affection was suspected, but the case was cured by hypnosis. In the third chapter the author speaks of the combination of paralysis of the palate with paralysis of the laryngeal muscles, which he has observed in 12 cases, and which is not yet published by other authors. *Michael*.

Herringham (London).—*Fusiform Aneurism of a Right Aortic Arch*. "Brit. Med. Journ.," Nov. 21, 1891. Clin. Soc. of London, Nov. 13, 1891.

THE author read an account of the case of a man, aged thirty-nine, in whom a right aortic arch passed behind the œsophagus to the left side of the spine, and, becoming dilated, killed the patient by long-continued pressure of the trachea. The symptoms were severe cough, great inspiratory dyspnoea, paralysis of the right side of the larynx, hæmoptysis, and, later, dysphagia. After death there was found a fusiform dilatation of the aorta extending from the ascending part of the artery to the origin of the cæliac axis. Instead of passing in front of the trachea as usual, the right aorta had been preserved, and this, to reach the normal position on the left of the spine, passed to the right of the trachea and œsophagus, and then between the œsophagus and the vertebræ. Becoming dilated, it pushed forward, and bent and compressed the trachea. Instead of passing under the subclavian artery, the right recurrent laryngeal nerve passed under the aortic arch: hence the paralysis of the right side of the larynx and the escape of the right pupil. The specimen is now in the museum of St. Bartholomew's Hospital, and is believed to be quite unique, only twenty instances of the anatomical variety being known, none of them aneurismal.

Hunter Mackenzie.

Roman von Baracz (Lemberg).—*Median Tracheocele*. "Langenbeck's Archiv," No. 42, p. 523.

THE patient had a tumour about the size of a walnut in the jugular region, covered with normal skin. A tympanitic note was got on percussion. During the act of coughing the tumour enlarged to the size of an egg. An incision was made, when a large quantity of mucus and

air passed through the opening, and a probe went directly into the trachea. The author treats of the etiology, and points out that embryonic malformations may give rise to these tumours as well as disease of the tracheal cartilages.

Michael.

Treitel (Berlin).—*Stammering followed by Stuttering.* "Berliner Klin. Woch.," 1891, No. 39.

DESCRIPTION of a case in which both anomalies were combined.

Michael.

Wyllie (Edinburgh).—*The Disorders of Speech—Stammering.* "Edinburgh Med. Journ.," Oct., 1891.

Dr. WYLLIE recalls the two mechanisms required in speech—the laryngeal and the oral (the vibrator and the resonator). Normal speech requires perfect co-ordination of the action of the two. Very commonly stammering is due to delayed action of the vocal or laryngeal element, as is proved by its disappearance under the strong voluntary or automatic vocal effort made in singing, or shouting, or intoning. In speech some consonants are voiced (*b, d, z*, etc.), others are voiceless (*p, t, s*, etc.), and it is in the latter that the stammerer is most likely to come to grief. There is commonly a want of promptitude in attacking the initial consonant, and often the chest is only half filled with air. Sometimes again there is a surcharge of energy, and the explosives and nasal resonants are prolonged. Spasmodic movements may also take place. The greater frequency (5 to 1) in boys than in girls is not explained. Heredity and, probably still more, imitation appear to be causes. Sudden and violent emotion, such as a severe fright, is a well-known exciting cause. Dr. Wyllie advises that the patient should direct his attention instantly to the production of laryngeal sound (as by intoning the first syllable of his sentence), and not to the formation of speech by the mouth. He should utter full and resonant but natural tones, reading aloud, and if possible singing. He should be instructed to fill the chest at proper intervals. A study of the physiological alphabet is often of value. In cases of difficulty the daily attention of a specialist is indispensable, but intelligent determined patients can do much for themselves. [It will be seen that this well-reasoned analysis of the phenomena of stammering agrees in the main with the views expressed somewhat more popularly by Mr. Emil Behnke, whose lecture on the subject we abstracted in the number for July, 1891, of the JOURNAL OF LARYNGOLOGY. The opinions of an enlightened physician, like Dr. Wyllie, are well worthy of study in the original paper.]

Dundas Grant.

THYROID GLAND, &c.

Lloyd, Jordan (Birmingham).—*Bronchocele*. "Brit. Med. Journ.," November 28, 1891. Birmingham, etc., Branch of the Brit. Med. Assoc., November 12, 1891.

EXHIBITION of a large, solid, unilateral bronchocele, weighing nearly one and a quarter pounds, successfully removed from a woman aged fifty-one. It had been growing slowly for forty years, and had for several years back compressed the trachea. *Hunter Mackenzie.*

Wiesner (Hassmersheim).—*Movable Goitre*.

THE author speaks of a patient, sixty-nine years of age, suffering from goitre on the right side. The left side of the larynx was free, but on the other side a large tumour could be felt moving against the thoracic walls. It would be about the size of a child's closed hand. It was diagnosed as a case of movable goitre. *Michael.*

Langendorf (Königsberg).—*Study of the Thyroid Gland*. "Med. Woch.," 34, No. 37.

A STUDY of thyroid glands and their functions with regard to the purification of the blood. *Michael.*

Ribbert (Bonn).—*Regeneration of the Parenchyma of the Thyroid Gland*. "Archiv für Physiologie," 1889, 219 pp.

AFTER parts of the thyroid glands have been removed in dogs and rabbits in all new growths of the connective tissue can be detected, and within a few days a new formation of colloid substance takes place. If the portion removed be not too great new normal gland tissue rapidly forms. *Michael.*

Freund.—*Relation between the Thyroid Gland and the Mamma, and Female Genital Organs*. "Deutsche Zeitschrift für Chirurgie," 31, pp. 5 and 6.

(1) SWELLING of thyroid gland may be noticed during pregnancy. (2) The gland is enlarged in every case, almost up till the act of birth; (3) the gland may be enlarged during lactation. In forty-four cases of uterine fibroid chronic swelling of the gland was detected. *Michael.*

Paltauf.—*Abscess of Thyroid with Tumour of right Vocal Cord*. Gesellschaft der Aerzte in Wien. May 8, 1891.

THE author describes the case of a girl, twenty-one years of age, who died from septic mischief, following an abscess in the thyroid gland. The tumour was discovered underneath the left vocal cord, consisting of connective tissue. This had been diagnosed laryngoscopically previous to death. *Michael.*

Lehotzky.—*Sixty-two Cases of Enucleation of the Thyroid Gland*. "Wiener Klin. Woch.," 1890, Nos. 41 and 42.

THE author considers that most of these can be easily removed by

excision. Secondly, the recurrent nerve is not difficult to avoid. Thirdly, the operation is comparatively easy. Fourthly, enough of the gland should be left to prevent any cachexia resulting. *Michael.*

Schwarze (Dorpat) and **Schulze** (Bonn).—*Consequences of Extirpation of the Thyroid Gland.* "Neurolog. Centralbl.," 1889, No. 8.

EXTIRPATION of the gland is said by these authors to cause an increase of electrical irritability to currents. Spasms are said to occur similar to those in tetanus after extirpation of the gland. *Michael.*

Köhler.—*Atrophy of Goitre following Partial Extirpation.*

THE communication of Julius Wolf concerning the atrophy of goitre following partial extirpation is confirmed by the following case:—A patient, sixteen years old, had a goitre of the size of the head of a man on both sides of the trachea, and had the right half of the tumour removed. Some weeks later the left half also disappeared. The circumference of the neck decreased from forty to thirty-four centimètres. *Michael.*

Kapper (Doboi).—*Treatment of Soft Goitres by Parenchymatous Injections of Iodoform.* "Zeitschrift für Therapie," Bd. 15, No. 9.

THE author has applied injections of iodoform in fifteen cases, as recommended by Mosetig Moorhof. In all cases he obtained a reduction of the circumference of the neck of eight to ten centimetres, and the therapeutic as well as the cosmetic result was very satisfactory. *Michael.*

Kaufmann (Zurich).—*Self Treatment of Thyroid Gland.*

THIS is the report of the case of a patient who treated himself by poultices. The tumour became soft, opened gradually, and after a discharge of pus was cured. *Michael.*

Köhler.—*Cure of Myxœdema.* Freie Vereinigung der Chirurgen in Berlin. Meeting, Oct. 12, 1891.

A PATIENT, forty-eight years old, with myxœdema, was treated for long without any effect. She had also a large ulcer in the left sterno-clavicular region like a large gumma. Near the ulcer also was a tumour of the size of an egg. By anti-syphilitic treatment the ulcer was cured, and all symptoms of myxœdema, the defective mental state, and the infiltration of the whole skin, disappeared. The author believes that in this case the myxœdema was caused by syphilitic degeneration of the thyroid gland. *Michael.*

Mosler (Greifswald).—*On Myxœdema.* "Therap. Monats.," 1891, No. 9.

THE author refers to cachexia strumipriva and genuine myxœdema. In spite of the fact that in such cases the thyroid gland is often intact, a connection between the gland and the disease must exist. *Michael.*

Mislavsky, Alexandr A. (Ekaterinburg).—*Lympho-Sarcoma of the Neck.* "Transactions of the Ural Medical Society," 1891, Vol. I., p. 8.

THE author reports the case of a pale but fairly well-nourished peasant boy, aged nine, who was admitted to the Verkho-Isetsy Hospital on

account of an indolent, fairly dense and knobby huge tumour, occupying the right side of the neck. Its upper margin reached the inferior edge of the lower jaw and the auricle; the lower extended down to the clavicle anteriorly, and the spina scapulæ posteriorly; the anterior boundary was situated close to the trachea and the larynx, and the posterior in the vicinity of the transverse processes of the cervical vertebræ. The new growth measured vertically 21 centimètres, and in the antero-posterior diameter 33. The axillary and all other lymphatic glands were normal; in fact, the examination of all organs failed to detect any deviations from the standard. According to the parents' statement, when the patient was three years of age they had first noticed a globular hard lump of the size of a nut situated on the right side of the neck, midway between the lower jaw and the clavicle. The swelling remained stationary until eight months ago, when it began to steadily and rapidly increase in size, and that notwithstanding a persevering medical treatment. In consideration of the facts, Dr. Mislavsky decided to excise the neoplasm. The operation (under chloroform) lasted about one hour, hæmorrhage being but slight. After the enucleation of the tumour *in toto* the wound (19 centimètres long) was closed with sutures and supplied with drainage. The sutures were removed on the sixth day, when the wound was found healed *per primam*, except a small area about the lower angle.

The new growth (weighing 1¼ pound) proved to consist of adenoid tissue. In view of its rapid increase, however, the author is inclined to believe that he had to deal not with a simple lymphoma, but with a lympho-sarcoma.

Valerius Idelson.

E A R, & c.

Szenes (Perth).—*An Audible Noise in the Ear.* "Internationale Klinische Rundschau," and "Centralblatt für Klin. Med.," 1891, p. 871.

A GIRL of ten had a "ticking" in one ear, which could be heard at a distance of about five inches, and had a snapping character occurring about 120 to 130 times a minute, not synchronous with the pulse. It continued during sleep. The hearing power was normal, but the drum membrane showed signs of old inflammation. It was supposed to be caused by rhythmical contraction of the tensor tympani or palatal muscles.

Dundas Grant.

Heimann (Warsaw).—*Blows on the Ears.* "Arch. of Otol.," 1891.

THE author relates a case in which a blow on the ear was followed by death in a week. The patient, who denied previous ear-disease, received a blow on the ear through the irritation caused by his apathetic condition. Acute otitic symptoms followed, and an amount of constitutional disturbance, which led to a diagnostic difficulty in excluding typhoid fever. This was cleared up, and little doubt was then entertained that the ear-

disease was of old standing, and that septicæmia had set in as its sequence. The autopsy revealed old caries of the petrous and mastoid, thrombo-phlebitis, and septico-pyæmia. This case is of interest in its medico-legal relations. The concealment of the previous existence of ear-disease risked the bringing of a charge of manslaughter against the administrator of the blow. In time, possibly, blows on the ears may cease to be administered as an outlet for the irascibility of teachers and others.

Dundas Grant.

Hills, T. Hyde (London).—*Cases of Deafness Treated by Injections of Pilocarpin.* "Brit. Med. Journ.," Nov. 14, 1891. Cambridge Med. Soc., July 10, 1891.

THE treatment was carried out daily in two cases for seven weeks, with some slight improvement at first, but ultimately with no results whatever.

Hunter Mackenzie.

Pritchard, Urban (London).—*Bony Growths in the Meatus.* "Arch. of Otol.," 1891.

THE author classifies them thus :—

1. Exostoses proper—

1. Multiple ; uniformly smooth and rounded ; pale and glistening on the surface ; even denser than ivory in consistence.

2. Irregular in shape ; of pale pinkish hue and dull appearance, with broad bases and of great density.

3. Single polypoid exostoses, consisting of a nucleus, so to speak, of ivory-like consistency, from the surface of which trabeculae of cancellated bone project into a layer of fibrous tissue, the whole being attached to the outer edge of the osseous meatus by a bony pedicle.

As distinguished from these is the hyperostosis described by Cassells, which is a diffuse enlargement of bony tissue. It is usually a comparatively large but uniform swelling of one side of the osseous wall of the meatus. Its growth may cease at any point, but it may extend till the meatus is completely closed.

Operation is recommended by Mr. Pritchard without delay in the third class of exostoses ; in the second, when there is any danger of occlusion of the meatus, and if there is persistent otorrhœa ; in the first, not unless there is any tendency to complete occlusion.

For the third class a dental elevator or stump forceps may be used. For the others a trephine, mounted on an electric or pedal dental engine. He advises a general anæsthetic in preference to cocaine.

Dundas Grant.

Kuhn (Strasburg).—*Cholesteatoma of the Ear.* "Arch. of Otol.," Vol. XX., No. 4.

THIS tumour (or tumor) consists of concentric lamellæ, made up of polygonal, flat, non-nucleated epidermoid cells, between which cholesterine crystals lie in greater or less quantities. The pearly gloss is produced, as was already pointed out by Müller, by the interference of light in the finer concentric layers of the polyhedral cells. According to Virchow, it is at first entirely enclosed in the bone, but frequently it distends the bony cavity by its gradual growth, causes absorption of the bone, which

it finally perforates so as to open into the tympanum; the external auditory came on to the surface of the mastoid, and into the middle of posterior cranial fossæ. Virchow describes the "capsule" as an exceedingly fine membrane. Mikulicz, Küster, and others, generally accept the neoplastic origin of this growth—possibly an involution of epiblast.

Von Troeltsch explained their existence as products from the surface of the chronically inflamed mucous membrane of the middle ear, which are retained where they are formed, and collect in great masses—retention tumours. In favour of Von Troeltsch's view are—(1) the flat arrangement of the cholesteatomatous masses; (2) their connection with the mucous membranes; (3) the constant presence of caseous pus in the centre of the growth.

Against this view stands the fact that the cells composing cholesteatomata differ from those of the middle ear, and resemble those of the meatus; also that rare cases of cholesteatoma occur with very acute symptoms, and without any preceding otorrhœa—moreover, the central nucleus of pus is wanting in many cases—and Von Troeltsch does not account for the capsule of connected tissue.

Wendt, though describing a true cholesteatoma (in opposition to Von Troeltsch), thought, with him, that it was commonly a product of desquamative inflammation of the tympanic mucous membrane. Lucae, finding granulations constantly occurring in cases of cholesteatoma, believes that the latter are caused by their shedding their epithelium, the cells of which accumulate in the spaces within the middle ear. He has, however, published cases of true primary cholesteatoma.

Habermann, in support of the secondary nature of the growths, brought forward cases in which the epidermic epithelium from the meatus was traced over the edges of a perforation to a cholesteatomata in the middle ear. Bezold, noticing the extreme relative frequency of cholesteatoma in conjunction with tubal catarrh and perforation of Shrapnell's membrane, holds that the catarrh may cause retraction and perforation of Shrapnell's membrane, which may lead to extension of the epidermis, and to the formation of a cholesteatoma in the auditus of the antrum, and the antrum itself.

Kuhn then relates the case of a man who, without previous otorrhœa, noticed attacks of intense tinnitus, especially after violent exercise, with impairment of hearing, staggering, and failure of vision. the dizziness increasing considerably when he pressed his finger against the left mastoid process. He continued in this state for many months, and then, after exposure to cold, suffered from extreme pain in the deeper parts of the ear, followed by purulent discharge from the left auditory canal. He became worse, and on examination was found to have a large fistula in the posterior wall of the meatus, and a very small perforation in the lower anterior segment of the membrane. On operation the mastoid was found to be perforated also, and filled with a typical cholesteatomatous mass, which had eroded its way into the posterior cranial fossa.

In this case it can hardly be supposed that the tumour was other than primary.

Dundas Grant.

Bezold, Fr. (Munich).—*The Treatment of Cholesteatoma of the Middle Ear.*
 "Arch. of Otol.," Vol. XX., No. 4.

GRANULATIONS, which are present in fifty per cent. of the cases, must be removed (with snare, syringe, sharp spoon, curette, etc.), and carious bone must be scraped. The malleus may have to be removed, and the mastoid to be opened. The cavity is syringed out with a four per cent. boric solution, and boric acid (powder) is insufflated. Bezold, associating cholesteatoma with perforation of Shrapnell's membrane, and attributing the latter to Eustachian catarrh, insists on the therapeutical and prophylactic value of Politzerization and naso-pharyngeal medication.

Dundas Grant.

Schmiegelow, E.—*On Perforations of the Membrane of Shrapnell, with Remarks on the Formation of Cholesteatomata.* "Arch. of Otol.," Vol. XX., No. 3.

HE considers that these perforations arise from inflammation in the upper cavities of the tympanum (Prussak's space, Kretschmann's space, etc.), originating either in median or external otitis. The reason for their lasting longer than the general tympanic inflammation is that the exudation is pent-up in these partially closed cavities. The inflammation in the largest upper cavity (which he christens the "antrum" of Shrapnell) leads to caries of the head of the malleus and body of the incus and to prolonged suppuration in the "attic" ("cupola" of Hartmann). He declines to accept the explanation that extension from the external ear takes place through a foramen of Rivini, as the existence of such a foramen as a normal occurrence is very unlikely, its presence in the membranes of new-born children not having been observed, and its occurrence in others being probably the result of disease. Cholesteatomata are formed in these spaces owing to the irritation of retained exudation acting on the mucous lining. The lining becomes dermoid like the mucous membrane of the nose in ozaena—layers of pavement epithelium supported on an unmistakable rete Malpighii. In this way layer after layer of cells is thrown off internally, and the cholesteatomatous mass thus formed. He thinks there is no need to ascribe the change in the cells to any migration inwards of the epidermis of the meatus, so exactly do the metaplastic changes in ozaena, and those described by Billroth as taking place in mucous membranes subjected to mechanical insult, correspond with the appearances he has seen in cholesteatoma.

Dundas Grant.

Spratling, L. W.—*A Case of Hematoma Auris without Mental Disease.*
 "Med. Rec.," Nov. 21, 1891.

THE ear suddenly became painful, and in two hours was a hot fluctuating tumour about the size of a hen's egg. On puncture, 10 cc. of arterial blood was evacuated, and the tumour refilled rapidly. On repetition of the puncture next day it filled again. In nine days the pain was gone, but the tumour was very little reduced in size. It gradually contracted, and in three months' time presented the well-known thickened and puckered appearance. The same thing had happened to the other ear

two years previously. No history of syphilis, rheumatism, alcoholism, scurvy, or hæmophilia. He was a robust, ruddy, somewhat plethoric sailor.

Dundas Grant

Poli (Geneva).—*On Intra-tympanic Operations*. “Rev. de Laryngol. d’Otol. et de Rhinol.,” Oct. 15, 1891.

CONSIDERING chiefly the operation of mobilization of the stapes, and its *technique* (apparently on the cadaver only), Dr. Poli judges it to be free from danger and worthy of being practised in cases of deafness and tinnitus which do not yield to ordinary means.

In a discussion on the subject, **TOTI** thought any resulting benefit might be due to persistence of the operative perforation. **POLI** said the perforation did not persist. **DR. COZZOLINO** thought that post-suppurative cases were the most—perhaps the only—favourable cases. He appeared to consider paracusis a contra-indication. **CORRODI** had seen favourable results in Paris, and thought the operation should be tried when other means failed. **MASSINI** considered paracusis the principal indication. [**MIOT**’s results in a large number of cases would lead us to consider the adhesions following suppuration of the tympanum as the only ones on which the operation might be practised with any great hope of improvement. His account of the antiseptic precautions and method of operation is fully detailed in his monograph on “Mobilization de l’Etrier,” Paris, 1884.]

Dundas Grant.

Daudois.—*A Case of Cerebral Abscess Evacuated by Trephining*. “Rev. Med. de Louvain,” 1891, No. 8.

A YOUNG man of twenty-five had had a discharge from the left middle ear since five years of age. A purulent and fœtid discharge had lasted, with intervals, up to three years ago, and hearing was nearly abolished.

On June 13, 1891, after a railway journey and exposure to cold wind, the pains in the ear had reappeared, and were accompanied with intense fever, œdematous swelling of the left auditory meatus and mastoid region. On June 15 the symptoms were aggravated by the appearance of cerebral phenomena. On June 18 there was an abundant discharge, followed by subsidence of the alarming phenomena. On June 21 the central symptoms reappeared, accompanied with paralysis of the right upper limb. Trephining was resorted to. The first operation was performed on the spot recommended by Bergmann, but without result. The second was made according to Lucas-Championnière’s method; the third immediately behind and below this spot. The cerebral abscess was reached, and about 300 grammes of fœtid pus evacuated. Slight improvement followed the operation, but the patient died in coma, forty-eight hours after.

Dr. Daudois adds to the record of this case some considerations upon the utility of trepaning in intra-cranial suppuration following otorrhœa.

Hicguet.

Lichtenberg (Buda-Pesth).—*Collapse of the Tympanic Membrane*. “Rev. de Laryngol. d’Otol. et de Rhinol.,” Oct. 15, 1891.

IN a case described, the patient had remarkable fluctuations of the hearing power without apparent reason. Three years previously she had

had an acute otitis, and had been *catheterized for two years without any benefit*. When Prof. Lichtenberg saw her for the first time the membrane appeared to be entirely wanting. Inflation, which was quite easy, was followed by a clapping sound and great improvement in hearing. On inspection, a bulging of the relaxed membrane nearly filled the inner fourth of the external meatus. The atrophy of the membrane, originally caused by the inflammatory attack, was probably intensified by the continuous use of the Eustachian catheter. [The extremely transient improvement in hearing, following physiological or artificial inflation of the tympanum, is characteristic of relaxed membrane. The most satisfactory method of confirmatory diagnosis is the use of the "pneumatic speculum." Seeing the injurious effect of the continued use of the catheter, or of Politzer's bag in such cases, the routine use of the pneumatic speculum cannot be too strongly insisted on. As regards treatment, we have found considerable benefit follow the use of *contractile collodion*.]

Dundas Grant.

Würdemann (Milwaukee).—*Erysipelas and Acute Inflammation of the Middle Ear*. "Med. News," Nov. 21, 1891.

THREE cases are described in which acute otitis media supervened in the course of erysipelas. In the first, an apparently simple mucous catarrh of the tympanum recurred in a purulent and violent form after incision of a post-pharyngeal abscess and removal of an hypertrophied pharyngeal tonsil. Erysipelas appeared at the anterior nares, and spread over the face. Paracentesis of the membrane evacuated sanguineous pus, but violent pain continued until the erysipelatous attack completed its course. In the second, facial erysipelas extended through the mouth, pharynx, and Eustachian tube to the middle ear. Perforation took place spontaneously, but relief to pain did not follow. The third, like the other cases, was remarkable for the *absence of relief on the evacuation of the intra-tympanic pus*. Many "cocci" were found in the pus in the first case.

Dundas Grant.

Bobone, T. (San Remo).—*Ménière's Disease consecutive to Influenza*. "Bolletino delle Malat. dell'Orecchio," Nov., 1891.

A GENTLEMAN, aged forty-five, of robust constitution was attacked by influenza in January of the past year, and before the illness was quite over he was seized for the first time with giddiness, loss of consciousness, vomiting, cramps in the throat, etc., lasting a few minutes. In August a similar attack took place, and again in October. Between the attacks he complained of weight in the head, intolerance of light, and slight vertigo. In addition, soon after the first seizure he found himself getting rather deaf. On examination after the attack in October there were found catarrh of the pharynx and Eustachian tubes, no effusion in the tympana, but indrawing and dulness of the membranes. The hearing power was, for the watch, right $\frac{3}{150}$, left $\frac{3}{750}$, and whispered voice was heard at four metres by the right ear, 1.50 by the left. The C tuning-fork was not heard nearly so long on the left mastoid as on the right. Inflation increased the hearing power for watch tick to $\frac{6}{150}$ on the right side, but only to $\frac{6}{150}$ on the left. There seemed evidence then of a labyrinthine

lesion—probably hæmorrhage—with middle ear catarrh. Dr. Bobone, wondering at the absence of tinnitus, elicited on closer enquiry that on the occasion of the first attack the patient heard sounds like a chime of bells for a few seconds. The treatment prescribed was Dr. Grazi's formula :—Quin. valerianat. 4'0 grammes ; extract aconiti 0'80 gr. ; ext. cinchon. moll. q.s. ut fiant pill. xxx. One every six hours ; also iodide of potassium, Politzerization, and astringent gargles. The patient soon improved, and had only a slight attack in December. He heard well in the right ear, but the left still remained deaf. Still he was quite free from vertigo. Bobone refers to cases reported by Lannois, of Lyons (French Society of Otology and Laryngology, May 1st, 1890), and by Money ("Lancet," May 3, 1890).

Dundas Grant,

Knapp and **Bradford** (Boston). — *Tumour of the Cerebellum, in which Trephining was done for the Relief of Pressure.* "Med. Rec.," Sep. 26, 1891.

Loss of hearing, with some difficulty in swallowing and articulation, came on in a man who had for some time suffered from right occipital headache diplopia, dimness of vision and double optic neuritis, convulsive attacks and later increased headache, nausea, vomiting, blindness, and loss of smell. Mental condition was good. The region over the sylvian fissure was trephined, giving relief to pain. Death occurred in two months, and tubercle was found in the left lobe of the cerebellum.

Dundas Grant.

ASSOCIATION MEETINGS.

THE SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY, OF PARIS.

Meeting, June 5, 1891.

Eczematous Erythema consequent upon applications of Salol. By Dr. CARTAZ.

While even large doses of salol (4-6 grammes) administered internally cause no unpleasant symptoms, eruptions or eczemas may occur in the vicinity of its application to mucous membranes. Morel-Lavallée lately communicated to the Dermatological Society a case of cedematous angina, following upon applications of salol for a suppurative otitis.

The author related two cases. 1. An arthritic patient, with chronic pharyngitis and obstruction of the right side of the nose, from turbinated hypertrophy, which was removed by the cautery. Insufflations of salol were prescribed twice a day. On the third day the onset of erysipelas was feared by the patient, and Cartaz found an erythema, with swelling and irritation in the nose, and an eruption of vesicles, having all the characters of eczema. Though the irritation was calmed by starch poultices, the next day it had extended, the patient having continued his salol insufflations. When these were discontinued the eczematous attack declined within forty-eight hours.

In a second case, a pseudo-eczematous eruption occurred on the ala of the nose and upper lip, on the second day after using salol insufflations, after cauteri-

zation of the inferior turbinated body. The eruption declined directly on discontinuing the salol, but reappeared when, eight days after, the patient had resumed the salol, but disappeared again on discontinuing the insufflation.

In a third case, application of salol in vaseline (1 in 10) to the nose for rhinitis and ulceration was followed by intense eruption. On substituting aristol for salol, and applying starch in powder and poultices, the eruption quickly disappeared.

In a few cases where salol is used it may therefore give rise to violent irritation. This is due to its being split up by contact with fatty bodies into phenol and salicylic acid. A predisposition on the part of the patient must be presumed. All three of these patients were arthritic, two having previously had eczema, and one a rebellious acne.

LUBET BARBON: I have observed the same phenomena twice, once in a patient with a nasal affection, the other case in a patient treated for an affection of the external ear. In both cases an ointment of salol was used.

HERMET remarked that it was necessary to presume some special sensibility in certain patients, and it was not only salol which produced after-symptoms, but many other drugs did the same.

RUALT had for two years used a very weak solution of salol in vaseline for ozena, and had many times observed erythemas. Fifteen days before this, after curetting the nasal pharynx, he had insufflated salol in powder and a formidable eruption had resulted, with œdema of the eyelids, fever, &c.—in fact, all the signs of erysipelas. These disappeared immediately on discontinuing the salol.

BOUCHERON thought that there must be a special sensibility on the part of the patient, since administered internally salol never produced any such symptom.

GOUGUENHEIM had never seen any such cases.

Extensive Perforation of the Septal Cartilage of the Nose in Typhoid Fever.
By Dr. GELLÉ.

ANDRAL has shown that ulcerations occur more frequently during typhoid fever than during any other infectious disease. It is at the decline of the fever that these tendencies to suppuration and destruction of tissue occur, decubitus being one of the principal manifestations. Amongst others an ulceration of the larynx, necrosis of the cricoid, gangrene of the pharynx, and, especially in children, of the ear and cornea and tonsils (Ruault).

Loclization is explained by decubitus or friction, a frequent touching the same surface, the way being frequently prepared by hæmorrhages (epistaxis) or pruritus and scratching. These hæmorrhages, œdemas and ulcerations are caused by thromboses or septic emboli, or from general mal nutrition and absence of resistance to local irritation, or both causes combined.

In the case here recorded, after fever lasting twenty-one days, and apparently during convalescence, recurrence of fever with ilio-psoas abscess occurred, which was opened by M. Legroux. The author suggests that this was due to entry of infection through the nasal ulceration. The patient was a boy of sixteen, and in the interval between the two attacks of fever a very large perforation of the septum was observed, when antiseptic douches were being employed. Epistaxis had occurred early and constantly during the illness, and local irritation was great, the patient scratching the nose with the finger-nail until his handkerchief was soaked with blood.

RUALT had observed a similar case.

GOUGUENHEIM had sometimes seen this condition after or without previous epistaxis. These perforations are always on the anterior portion of the septum, and must not be mistaken for syphilis. They occur as a sequence of chronic rhinitis in subjects with a very thin septum.

HERMET had the opportunity of observing a large number of lepers at the St. Louis Hospital, and he had constantly found perforations of the septum in them.

A Case of Deafness due to Mumps. By Dr. GELLÉ.

In this case, as in a study recently published by the author ("Archiv. Internat. d'Otol et de Laryngol.," April, 1890) the cause of the deafness has been localized in the labyrinth, the integrity of the apparatus for transmission being evident. The case is characterized by a lesion resistant to treatment and situated in the auditory nerve, with rapid loss of hearing, the deafness being unilateral.

The patient was a girl ten years of age, who became totally deaf last March in the left ear after an attack of mumps. Some slight dulness of hearing had lasted since a violent attack of influenza in January, 1890. In the previous autumn she had had persistent diarrhoea, and had been to Kreutznach, where Politzer inflations were used without success. She had never had any pain. Hearing was entirely absent when the right ear was closed, and on the right side it was a little dulled. The tympanic membranes were very retracted, most on the left side. The nose was quite free, and Politzerization perfect on both sides.

Under iodo-tannic syrup and Politzer douches every other day, hearing rapidly recovered on the right side, but remained unaffected on the left side.

The almost insignificant lesions of the apparatus of transmission and total deafness led to a diagnosis of nervous deafness. Such a result of an attack of mumps, so rapid, powerful and noxious, is something which disconcerts the clinician, even if it be admitted that under the influence of the cachectic condition seen at first (diarrhoea, weakness, and appearance of advanced tuberculosis, followed by influenza) an atrophic process has affected the auditory nerve. Influenza increased the mischief, and mumps completed it in a sudden and irreparable manner.

Strychnine has improved the general health, but not the hearing.

Pilocarpin has been badly borne, and without affecting the condition.

A trial is about to be made of the continuous current.

Demonstration of the Local Anæsthetic Properties of Antipyrin—its Employment in certain Affections of the Throat and Larynx. By Dr. SAINT-HILAIRE.

In a recent work Coupard and the author indicated the therapeutic effects of antipyrin locally employed in the throat ("Rev. de Laryng. d'Otol. et de Rhinol.," No. 22, 1890). Symptoms of exaggeration of sensibility of the pharynx and larynx (cough, prickings, sensations of fish-bones, pain in ulceration, *e.g.*, in tuberculosis) have rapidly disappeared under its use. The author demonstrated that a few drops of a concentrated solution of antipyrin (4 grs. of antipyrin in 10 grs. of water) dropped into the eye of a rabbit produced at first a lively pain, rapidly disappearing, and in a few seconds the cornea and conjunctiva is quite insensitive to the touch of a fine point or even to pain when burnt with a hot wire.

The author concludes from experiments made at the laboratory of the Faculty of Medicine (1) that anæsthesia produced by antipyrin is complete, and affects sensibility to touch, heat and cold; the latter returns first. (2) The anæsthesia lasts generally from one to two hours. (3) To produce the anæsthesia the solution must not be of less strength than 30 per cent.; 10 per cent., 20 per cent., solutions have no anæsthetic effects.

G. Sée, Gley and Caravia have already noted this anæsthetic property of antipyrin. Its use will be indicated when prolonged anæsthesia is desired, as in tuberculous ulcerations, and in affections where the reflex elements predominate.

There is very little danger with the drug, and it can be given to the patient to use himself. The author employs this formula: Antipyrin, 4 grammes. Distilled water, 10 grammes. If desired to prevent the transient pain which follows its first application, a little cocaine (0.15 to 0.25 centigrammes) may be added. When rapid anæsthesia is required, cocaine is preferable, but for prolonged analgesia, antipyrin is better.

Foreign Body in the Larynx. By Dr. GOUGUENHEIM.

Dr. Gouguenheim presented a plate of false teeth which he had extracted from the larynx of a woman of thirty-nine, by means of Fauvel's forceps, eight days after having practised tracheotomy. The accident had occurred fifteen days before entry into the hospital, in the course of an attack of epilepsy. The extraction was easy, and the foreign body, as seen by the laryngoscope, almost completely obstructed the laryngeal cavity, the patient being aphonic and having pronounced stridor.

Observation to serve for the Study of Laryngeal Neuropathic Stenoses. By Dr. ALBERT RUAULT.

The case presented by the author was, he remarked, unique, and though incomplete at present, is to be published *in extenso* later.

A man, aged thirty-six, formerly a marine, alcoholic, and with a history of syphilis dating back twelve years, was referred to Dr. Ruault by Dr. L. Jullien for laryngeal stenosis. Dyspnœa was great, with permanent stridor. Laryngoscopically, double and complete paralysis of the posterior crico-arytenoids was seen, with marked tension of the vocal cords. Asphyxia being imminent, tracheotomy was performed. Some days after, more complete examination made it certain that the man was suffering from locomotor ataxy. At first relieved, the patient soon complained much of the canula, and begged for its removal, preferring death or suicide to a "disgusting infirmity." Intervention being necessary, Ruault thought that by resection of the recurrent laryngeal nerve a laryngeal hemiplegia would be obtained, and the glottis might be widened sufficiently to permit of removal of the canula. Consulting M. Charles Monod with a view to operation, that surgeon thought it a legitimate proceeding in the present case, and performed the operation accordingly, proceeding as for external cesophagotomy; but prolonging the incision lower, and reaching the left recurrent nerve below the inferior thyroid artery, he resected here about one and a half centimetres in length of the nerve. After the operation the patient appeared able to breathe, notwithstanding closure of the canula, and this was therefore removed, the patient recovering in a few days without any post-operation complication.

On laryngoscopic examination, to Ruault's great surprise, he found the *larynx to present the same appearance* as before the operation, the vocal cords being in the median position lowered on inspiration and raised on expiration, the larynx being absolutely symmetrical, and without any trace of hemiplegia. The vocal cords were flabby, the patient breathed nearly sufficiently well when at rest, but it was evident that the result of the operation was negative. Monod and the author hoped that atrophy of the vocal cord of the side operated on would soon occur, and that the glottic aperture would thereby be enlarged a little: but three weeks afterwards there was no trace of atrophy, and dyspnœa had recurred. The patient was averse to entering the hospital again, and Ruault intended to ask Monod, after performing tracheotomy, to try resection of the superior laryngeal nerve; but the patient delayed entering the hospital for some days, and when he did so, was already asphyxiating. The opening of the trachea was not followed by re-establishment of the respiration, and death occurred the same day.

An autopsy was not allowed by the family, but the larynx was removed and appeared to be healthy. The articulations preserved their normal mobility, the muscles their volume and physiological appearance, and there was no lesion of the mucous membrane. Histological examination of the muscles was not made, but the resected nerve was examined in the laboratory of Professor Cornil by Dr. Gombault, and found to be much altered.

Without making a long commentary upon the case, Ruault confines himself to remarking how complex and little known is still the question of innervation of the larynx, although contemporaneous works, especially those of Exner and Onodi, have already thrown some light on the subject. It was evident in this case that innervation of the left half of the larynx was far from being performed entirely by the left recurrent: the inferior laryngeal of the opposite side perhaps, and more probably the left superior laryngeal, contributed largely to this innervation. Even if the double paralysis of the posterior crico-arytenoid muscles was of a myopathic nature (which could not be denied, in the absence of histological examination of the muscles), resection of the recurrent ought to have produced a laryngeal hemiplegia of the same side, if the recurrent had alone innervated the muscles to which it sends its motor filaments.

Dr. GOUGUENHEIM asked if histological examination of the dilators had been performed.

Dr. RUAULT answered that it had not.

Bilateral Paralysis of the Posterior Crico-arytenoid in a Case of Aneurism of the Aorta. By Dr. CARTAZ.

Unilateral paralyses from pressure upon the recurrent nerve are common, but bilateral paralyses are very rare, this case bringing up the number of recorded cases to only twenty. The cases cited by Jolivet in his thesis and in other memoirs, when there has been no laryngoscopic examination, are not included. Ziemssen's is one of the first recorded cases. In this bilateral paralysis of the recurrences was due to aneurism of the aortic arch and trachio-cephalic trunk ("Deutsche Archiv für Klin. Med.," IV., 1888). Similar cases have been recorded by Traube, Beschorner, Morell Mackenzie, Semon, MacCall Anderson, Saundby, Felice, Massei, Schnitzler, and Fraenkel. In these cases there was sometimes quite distinct paralysis of the recurrences with cadaveric position of the cords, and sometimes isolated paralysis of the abductors. Sometimes the paralysis is complete on one side and incomplete on the other, simple paresis (Schnitzler, Felice). In one case, unique the author believes, Schnitzler saw paralysis of the adductors from compression by an aortic aneurism.

The case recorded by the author is a very clear example of paralysis of the crico-arytenoidei postici. Unfortunately the condition was not confirmed by an autopsy. The patient, an old railway employé, aged fifty-five, with undoubted aneurism, had been obliged to quit his employment on account of palpitation and painful symptoms on slight effort. He was fairly well for some months, while resting. Fifteen days previously, after some gardening operations, the patient noticed that the voice, which had been a little "veiled" for some time, became more so, and pulsations in the chest became more obvious. For four days there had been trouble of breathing, oppression, and three or four daily attacks of true angina pectoris, which had subsided under inhalations of chloroform. When seen the patient was seated on the bed, breathing with great difficulty, inspiration being noisy and difficult, expiration being free. The voice was muffled, not extinct. Laryngoscopically both vocal cords were seen to be near the median line, separated two or three millimètres, with semi-concave edges, but not exhibit-

ing any change in position on respiration or phonation. The signs of thoracic aneurism existed. The left radial pulse was nearly normal, the right pulse nearly entirely absent. At a second visit, when the patient had inhaled chloroform to a condition of semi-anæsthesia, for his painful spasms, a laryngoscopic examination showed the cords to be in the same position as formerly. There was, therefore, no secondary contraction of the adductors, which was proved by the absence of tension and the straightness of the free edge of the cord. The patient died suddenly twenty-four hours later. No autopsy was possible. The condition was one of primary lesion of the abductors from compression by a vascular tumour, a paralytic lesion which was rigorously established by the anæsthesia accidentally produced by the patient himself.

Meeting, July 3, 1891.

Two Cases of Cure of Chronic Suppuration of the Tympanum by Excision of the Malleus. By Dr. LUC.

The employment of the curette in suppurative osteitis of the tympanum along with granulations and polypoid vegetations, while in most cases almost immediately stopping the discharge, is in some cases insufficient, and should be preceded by ablation of the first, or of the first two ossicles, either if an alteration in these ossicles has been recognized sufficient to lead to suppuration, or if sufficient room for proper curettement can only be obtained in this manner. Dr. Luc records two cases:—

1. Suppuration of the right ear in a strong man aged twenty-four, dating from seven years of age, with perforation of Schrapnell's membrane and caries of the head of the malleus. This ossicle was extracted, the membrane round the bone being excised, and the tendon of the internal muscle being resected with a bistoury specially designed by the author for this purpose. The ossicle was then seized with forceps and extracted. It was extensively altered. The upper tympanic cavity was then curetted in every accessible direction, and tamponed with iodoform gauze. Immediately after operation, intense buzzing and violent vertigo with bilious vomiting occurred, rendering the standing position very difficult. These symptoms very completely disappeared at the end of two weeks. There was besides aggravation of the deafness of that side. Two months afterwards all vertigo had ceased and hearing was much improved, the watch being heard at one centimètre (previously heard at two centimètres), all discharge had ceased, and a depressed cicatricial membrane occupied the place of the absent malleus.

2. A lady, aged twenty-nine, had purulent discharge from the left ear of several years' duration, and a condition of osteitis, probably tubercular, of the walls of the tympanum was found, the auditory canal being filled with a polypoid mass which was removed with the snare, and afterwards cauterized with chromic acid. Frequent instillations of absolute alcohol, holding in suspension powdered boracic acid, were ordered. They produced great pain, and at the end of three days complete paralysis of the left half of the face. Discontinuing the alcohol, the paralysis disappeared spontaneously at the end of three weeks. The polypus reformed. With a cutting curette it was removed, but each time was followed by rapid regrowth of the fungosity. It was found that the polypus was inserted behind the malleus, in the postero-superior region of the tympanum.

The whole malleus was then extracted under chloroform, then all the masses of polypi were removed with a curette, and cauterization was effected by chloride of zinc 1 in 10, and the canal tamponed with iodoform. There was no vertigo afterwards, but slight pain and transient insensibility of the left edge of the tongue.

Though the ear suppurated profusely, there was no regrowth of the polypus during four weeks. On the 29th March, however, a new polypus was detected, apparently inserted like the preceding ones, high and behind in the direction of the *aditus ad antrum*. Under cocaine the curette was introduced as high and far back as possible, and the suspected region thoroughly curetted. At the end of fifteen days supuration was nearly cured and there was no trace of recurrence of the polypus. Two months after operation there was complete cure. In this case, although the malleus presented no alteration, its removal was justified by the result, and gave room sufficient to determine the extent of the lesions and deal with them effectively.

Carcinoma of the Left Vocal Cord—Laryngo-fissure.—Death five days after.
By Dr. LICHTWITZ.

The patient, aged fifty-three, consulted the author on November 7, 1889, for extinction of the voice which had appeared in August. For two or three years the patient had had several attacks of hoarseness, commonly disappearing at the end of some days. The voice, however, was never quite clear in the intervals. General health good. No syphilis.

Laryngoscopically, a fusiform swelling of the free surface of grey-yellow colour occupied the two anterior thirds of the left vocal cord, not reaching to the anterior angle. On the posterior third of the same cord was a depression, and a deep-red colouration. The cord moved less readily than its fellow. There were no enlarged glands. A portion of the growth removed was examined by Prof. Ferré and by Prof. Waldeyer. While the former diagnosed without doubt a malignant tumour, the latter could not be so positive, and declared the appearances to be only suspicious. He wrote that "the appearances recall the preparation from the 'tumour of the Emperor Frederick. The sections of the fragments removed by 'Mackenzie, and examined by Virchow, were shown to me by the latter. They 'presented the same appearance as your specimen, *i.e.*, they contained some 'cornified bodies (*corps cornûs*) and papillæ covered with thickened epithelium. 'Virchow had rightly hesitated to conclude that it was carcinoma, and you see 'that although instructed by this case, I dare not attach this diagnosis to your 'patient. Generally, the small fragments which can be removed do not suffice 'for a certain diagnosis; it is necessary to consider the laryngoscopic appearance 'and clinical course."

Waldeyer could not pronounce himself more definitely upon a second fragment removed. Nevertheless, he advised, with Prof. Ferré and the author, extirpation of the affected cord.

Anti-syphilitic treatment was not followed by any modification in the appearance of the cord. The small wounds caused by ablation of the fragments cicatrized, and were, perhaps, covered too quickly.

The other parts of the larynx and the subglottic space appeared healthy, except for the anterior surface of the posterior wall of the larynx, which was slightly arched.

On February 4, 1890, three months after the first examination, Dr. Demons performed tracheotomy and, on February 22, laryngo-fissure. Trendelenburg's canula being inserted the thyroid cartilage was excised, the left vocal cord and ventricular band was removed, the posterior wall of the larynx was scraped and, finally, deeply cauterized. The operation lasted three hours, being frequently interrupted by penetration of blood into the bronchi, in spite of the canula. The wound was sutured, and an œsophageal bougie inserted. Next day there was fever, with all the signs of hypostatic pneumonia. Death occurred on the fifth

day, and an autopsy was not permitted. Microscopic examination of the parts removed made evident the nature of the tumour. All parts, even the small fragments of cartilage, exhibited carcinomatous degeneration.

Prof. Ferré concluded that the tumour invaded the deeper parts of the larynx, and would certainly have recurred had the patient lived.

Waldeyer wrote:—"Your case differs from that of the Emperor Frederick by "the considerable development of laminar tissue, which allows of the tumour "being grouped in the class of scirrhous cancers. The cancer of the Emperor "Frederick presented rather a medullary character."

This case again exhibits the difficulty of early and certain diagnosis of primary cancer of the larynx. Apart from phonation, there were no subjective symptoms. The laryngoscopic examination, though causing the author to suspect malignancy, was not sufficiently exact to cause a recommendation, on that ground alone, of partial extirpation. As to microscopical examination, the pathological experts differed in their interpretation of the specimens.

The author believes that in such cases it is better to have recourse to hemilaryngectomy.

Meeting, November 6.

Suppurative Otitis and Cerebral Symptoms after Posterior Tamponing for Severe Epistaxis. By Dr. GELLÉ.

The relation of cause to effect is demonstrated, but yet little known to practitioners, and ought to be insisted upon. The author has already twice treated of this subject, before the Society of Practical Medicine in 1882, and again before the Society of Otology and Laryngology, and has demonstrated that posterior tamponing of the nasal fosse in epistaxis is dangerous not only to the ears, but to life. The pathogeny of the aural complication is well known, yet the treatment is continued. Many surgeons, like Prof. Tillaux, of the Hôtel-Dieu, think that it is merely a question of tampon—that if in form and volume being well graduated to the size of the choanæ, there is no danger to be feared. But the time during which the tampon remains *in situ* in the nasal orifice near the Eustachian tubes, which it compresses forcibly, appears to be one of the important elements in the production of this complication. Tillaux advises washing of the nasal cavities up to the second day, but he leaves the tampon up to the fourth day. But in both his memoirs the author has proved that the ears had already suppurated, although the tampon was removed after two days. This rapid result is astonishing, but analysis of the cases renders it intelligible. Though epistaxis often occurs before otitis, there are cases where it accompanies otitis, occurring from the same sanguinary raptus, and, so to say, marks its *début*. It is also found to occur in the nares on the opposite side to that of the ear affected with otitis. These facts prove that there is oftener than is thought a very intimate evolutionary relation between the two phenomena, which appear simultaneously and not consecutively to each other.

We cannot forget the cases in which hæmorrhage, whatever its origin, has entered simultaneously the nostril and the Eustachian tube, bleeding having simultaneously taken both paths. Nasal stenosis helps this reflux. To the well-known method of genesis of otitis, viz., irritation due to contact of the tampon, and entry of secretions and putrefied blood into the tympana, there are others to be added. The ear may then be invaded by the blood primarily or secondarily; otitis is primary and hæmorrhagic, or secondary and infectious, but in both cases there has been penetration of a foreign body into the middle ear. The tampon both opposes the exit of blood which has already penetrated the tympanum and

facilitates the penetration of purulent secretions into an ear previously unaffected. In both cases tamponing is bad. The blood in the nostrils, pent-up, putrefies, being mixed with the micro-organisms contained in the nares, and the inflammation is septic. Infectious otitis, or bilateral suppurative otitis, appears simultaneously, and with the characters of gravity and rapidity of invasion common to the evolution of septic affections. If the obstacle be not removed in time, it is not the patient who will demand help—he may be in coma or delirious—and the diagnosis is made by the exit of infectious pus from one or both ears; or the patient may succumb to the propagation of the infection to the cranial cavity. This terrible result is not rare, and the author recorded a case in 1882, and has lately recorded some fresh instances. Posterior tamponing is therefore dangerous, not only to the ears, but to life itself. It is not a more or less badly-made tampon, but the tamponing itself which is a bad proceeding, and the longer the tampon remains *in situ* the greater the danger.

The author cited the case of a man, fifty-four years of age, who for five years had had slight chronic albuminuria, who was suddenly attended with severe epistaxis from the right nostril, and his medical man, after two days' trial of all means known to him of arresting the hæmorrhage, practised posterior tamponing. Though the nasal fossa was washed out with warm carbolized lotions, the tampons was retained for three and a half days. During the second night the patient complained of violent pains in the right side of the face, the head, and right ear; there was fever and restlessness; he appeared very depressed: and he swallowed with difficulty. Subsequently the pains increased, the neck became swollen, the head fixed on one side. On the third day the patient was somnolent and moaning, and roused with difficulty, but with sharp cries of pain. Nothing relieved the patient; torpor became continual, with all the signs of a cerebral affection. On the fourth day the tampon was removed, and the nasal fossa washed out. The ear and pillow were covered with thick yellow pus and foul smelling. The right ear was totally deaf, and the mastoid region red hot and painful. Great relief followed this discharge of pus during the night. Coma supervened. At this period the author first saw the patient. The tampon was removed. Fifteen days after, suppuration was less abundant, and swelling of the mastoid region was less; pus still issued from the ear, a sufficient perforation giving issue to it. The symptoms gradually subsided, and a month after the patient was nearly recovered, the drum cicatrized, and hearing much improved.

SAINT-HILAIRE said that there were rare cases in which hæmorrhage could only be arrested by posterior tamponing. Should the practice be entirely discontinued because of the danger of suppurative otitis? and if so, what did M. Gellé propose as a substitute?

CHATELLIER remarked that there was no hæmorrhage which required posterior tamponing. Epistaxis is always caused by a rhinitis limited to the anterior part of the septum, and the artery can be seen pulsating, and anterior tamponing is all that is required.

LUBET-BARON said that in ninety per cent. of cases the hæmorrhage is limited to the anterior part of the septum.

LUC remarked that epistaxis was due to a lesion of the anterior part of the septum, but ulceration might be situated behind, or hæmorrhage might be produced after surgical intervention, and then posterior tamponing became indispensable, but if antiseptic (iodoform), otitis was not to be feared.

GOUGUENHEIM remarked that posterior tampons were dangerous, and anterior tampons very useful. Iodoform gauze gave the best results in surgical hæmorrhages. M. Gellé had perhaps exaggerated the dangers of posterior tamponing. He

had frequently used it without untoward circumstances, but never had seen any complication though left *in situ* two days or more.

MARTIN said that anterior and posterior tamponing must be distinguished on account of the traumatisms produced.

LOEWENBERG wished to know if there was any congestion of the ear at the same time as the epistaxis.

CHATELLIER preferred iodol or salol to iodoform gauze.

GOUGUENHEIM said iodoform gauze was hæmostatic. He never used Bellocqs' sound, but a soft or caoutchouc sound, easy to introduce without injury to the mucous membrane.

GELLÉ said that he had arrested an enormous hæmorrhage by subcutaneous injection of ergotin. In answer to Loewenberg he said that he had at the same time found a fluxion of blood into the ear.

Two Cases of Fætid Empyema of the Maxillary Sinus, without Apparent Dental Alteration. By Dr. LUC.

In a previous work ("Arch. de Laryng.," 1889, pp. 145-204), he had expressed the opinion that these abscesses are always started from dental suppuration. Since then, he had seen a case of empyema completely independent of all dental caries, and apparently attributable to an attack of eysipelas. In the two cases now recorded the suppuration was caused by a dental alteration so slight that it could not have been suspected before extraction of the tooth.

1. The first case was that of a lady with fætid discharge from the right side of the nose. The middle meatus was covered with creamy pus, covering polypoid vegetations. The teeth appeared to be perfectly sound. Nasal washes of boracic acid were prescribed. A year later the patient was precisely the same. By electric illumination, while the left side was brightly illuminated, the right side was quite dark. A history was obtained of laparotomy two years before, for hæmorrhagic salpingitis, fifteen days after which she had experienced neuralgic pains of the right side of the face with great sensitiveness of the teeth of that side, rendering mastication very painful. The patient preferred to lose a molar tooth rather than be operated upon through the canine fossa, and the first molar was extracted. Insensibility was produced by bromide of ethyl and the sinus was opened and some pus removed. The rest of it was got rid of through the nasal fossa by irrigating through the syringe. At the roots of this tooth, M. Brochard found traces of old inflammation which had produced club-shaped thickening, and these were no doubt indications of an old alveolar dental periostitis, the inflammation having extended to the sinus, producing suppuration with no symptoms beyond an intermittent discharge of pus through the nasal fossa.

2. The second case was a man of fifty, with fætid discharge from the right nasal fossa of ten years' duration. The middle meatus was filled with caseous pus, indicating empyema of the sinus, which was confirmed by electric illumination. All the upper teeth were in perfect condition, except the first molar which had a small cavity in it on the crown, which had produced no symptoms. The tooth was removed and traces of old periostitis were found at the root. The history given was that, ten years before, the nasal discharge had commenced after a slight attack of fever caused by a chill. Perforation of the sinus, and irrigation with boracic solution, led to the discharge of a large quantity of fætid pus.

The conclusion from these two cases is that it is not necessary that a molar, and especially the first molar, should be greatly carious to give rise to affection of the sinus. The initial lesion may be a very slight attack of dento-alveolar periostitis, without any modification in the visible portion of the tooth, and evolving in a latent

manner. Inspection of the teeth in such a case would not lead to a suspicion of empyema of the antrum, and only electric illumination could give positive diagnosis.

LOEWENBERG asked if it was a principle that Luc never operated by the nasal fosse?

LUC said he had never obtained good results by operating through the normal orifice, or by puncturing the inferior meatus. Irrigation through the natural opening only reaches the upper part of the sinus, and it is not easy to operate through the inferior meatus, the walls being very thick sometimes, and in one case he met with severe hæmorrhage. The first molar should always be removed.

MARTIN said he had cured cases by simply making irrigation through the orifice of communication of the sinus with the middle meatus.

LUC remarked that this was the exception, but irrigation might be tried if all the teeth appeared sound.

Naso-Lobular Neuralgia, symptomatic of Tertiary Nasal Syphilis. By Dr. GELLÉ.

The author recently had seen a boy, aged fourteen, who had right otorrhœa since one year of age, with nearly absolute deafness of that side. The discharge was intermittent, but never cured. For fifteen days there had been choreiform movements of the right arm and leg. There was a large triangular perforation of the right septum, the antero-inferior segment of which was fungating and bloody, and covered with creamy pus. Cleansing did not improve hearing. Whistling by Valsalvan inflation. Respiration through the nose was difficult and snoring, expiration very difficult. Abundant muco-purulent nasal secretion, pale red and hypertrophied mucous membrane, inferior turbinated hiding the superior of each side, nasal intonation, and breathlessness on exertion. Thick secretion, but no growths in the naso-pharynx except over-growths of the inferior turbinateds. No pain and no history of tuberculosis. Badly-formed but fully-developed teeth, shallow palatine arch. The mother had previously been treated by the author for acute spontaneous and persistent pain localized on the right side of the nose, and having its greatest intensity at the junction of the cartilage with the bone. There was no abnormal swelling or affection of the nose or septum, no discharge or anosmia. There was nothing abnormal in the palate or pharynx. Fifteen days later the mucous membrane was dry and pale, and the pain persisted from the naso-lobar cleft to the angle of the eye. Some time after there was general hypertrophy of the mucous membrane, and a red, diffuse, flat, oblong tumefaction appeared, with lateral aspect of the nose, with slight œdema. This swelling slowly increased, and was evidently an osteitic or periosteitic affection of specific nature. Under appropriate treatment all the symptoms (pain and swelling) gradually disappeared. It was therefore probable that the otorrhœa and chronic rhinitis of the child were manifestations of the hereditary syphilis. The cases are of interest, because it is not always that the relation of cause to effect can be so precisely stated.

A Case of Subglottic Polypus. By M. PAPADAPPOULOS.

A girl, aged eighteen, came to the author's clinic with almost complete aphonia, dyspnœa, and the sensation of a foreign body in the throat, which symptoms had appeared first three months previously.

On laryngoscopic examination, while phonating the vowel *e*, only the white pearly vocal cords were visible, but during deep inspiration a pyriform red tumour, the size of a small pea, with smooth surface, occupying the anterior third of the glottic commissure and inserted on the thyroid wall just below the anterior half of

left vocal cord, was perceived. The growth was removed at one sitting by Fauvel's forceps. Dyspnoea disappeared and the voice returned.

The author thinks that this case proves once more the value of Fauvel's forceps for the removal of subglottic growths, even in inexperienced hands.

A Leech in the Larynx. By Dr. C. AUBERT. (Note presented by Dr. Ruault.)

On Sept. 22, 1891, the patient, a lady aged fifty-seven, first saw the author. On the 16th the accident had happened, and a sudden short pricking sensation which she had experienced during dinner had been attributed by the patient to the bad quality of the wine which she had drunk. Quite comfortable up till eleven o'clock that evening, she had then suddenly experienced attacks of suffocation. These attacks had continued, and were accompanied with expectoration, and at times, even vomiting of blood, extinction of the voice, and a flapping sound on both inspiration and expiration. Numerous applications (such cases appear to be common in Kabyle), *e.g.*, gargles, fumigations, emetics, green tobacco, salt, vinegar, sea water, had failed; equally so had the attempts at direct extraction. When seen by the author the patient was breathless, anæmic (from loss of blood, which she never ceased to expectorate), the voice was scarcely audible, the pulse was small, and the face cyanosed. A sharp attack of suffocation had been experienced while journeying in the train to see the author. A first examination revealed in the bottom of the pharynx, the left ary-epiglottic fold, and the epiglottis three triangular bites, still bleeding, but no leech. It was only on prolonged examination, and provoking a forced expiration, that this was perceived below the posterior surface of the epiglottis. Attempts at extraction with Wild's snare and Cusco's forceps had to be discontinued on account of sudden severe attacks of suffocation. The leech was displaced a fifth time, and fell across the glottis, and was last seen fixed in the first tracheal ring in front. The patient was taken into the hospital, and as asphyxia was imminent, tracheotomy was performed under chloroform, when attempts at endo-laryngeal removal could be resumed. After several trials, and when Trendelenburg's canula was ready for the further operation of cricotomy, a last attempt with Cusco's forceps allowed the seizure of the leech and its removal. It was four centimetres long, and as thick as an ordinary pencil. The rapid development of the creature is interesting. Swallowed in the filiform state, and absolutely invisible in water, it had grown during seven days to its present dimensions. The patient made a speedy recovery.

**MEETING of the OTOLOGICAL SECTION of the Sixty-fourth Gathering
of the ASSOCIATION of GERMAN NATURALISTS and PHYSICIANS.**

(*"Monats. für Ohrenheilk."*, Oct., 1891).

September 21, 1891. Prof. SCHWARTZE, *presiding*.

Prof. KIESSELBACH.—*On the Accord between the Galvanic Reactions of the Eye and Ear.*

With closed eyes, anodal stimulation causes a brightening of the field of vision, with a violet glow, *i.e.*, all the fibres of the optic nerve are excited, but especially those which serve for the perception of the shortest (highest) light-vibrations. Cathodal stimulation produces, on the other hand, an obscuration of the field of vision, with, in some persons a feeble red glow, indicating that there is a lowering of excitability in all the optic fibres, those

which subserve the perception of the longest (deepest) light-vibrations being least affected. If the same experiments are made in a slightly darkened room with opened eyes, it is found that with the cathode the shadows become darker and the contours of the objects in the room appear blurred; with the anode the shadows become brighter, and the outlines of objects more distinct. The colour phenomena are most easily noted by the observation of a silver coin placed in the shade on a dark background. This appears during cathodal stimulation indistinct and of a dirty dark-brown, but during anodal stimulation the contour and imprint appears sharp as if illumined by a pale violet light.

In the case of the ear the formula is difficult to find, and in some people the reaction is absent completely. Most frequently with the anode there is a high, clear ringing, corresponding to the short violet light-waves; while with the cathode, deep tones correspond to the low red rays. The middle tone fibres are also acted on, becoming more excitable under the anode, and less so under the cathode, analogously with the brightening and darkening of the field of vision. It is to be noted that in many people the anode causes the "proper" tone of the ear to be heard under the anode, while under the cathode certain aural sounds are made to cease. The very high ringing sound is therefore always purely subjective, while audition of the "proper" tone (four to five-stroked octave) may be brought about by increased excitability of the acoustic nerve, or by objective intensification of the "proper" tone, as by increased determination of blood.

Kiesselbach considers that the ocular and auditory phenomena caused by variations in the strength of current are produced in an indirect way, viz., through the contractions set up in the intrinsic muscles.

He further showed, by means of drawings, how the mode of working of the current could be determined by the virtual poles, so that the phenomena which were induced in the eye by the ascending current corresponded to those induced in the ear by the descending current, and conversely.

Dr. BRIEGER.—*On Affections of the Middle Ear in Lupus of the Nose.*

Gradenigo's histological observations have proved that lupus can extend along the Eustachian tube from the nose to the middle ear. Brieger, in twenty-three cases of nasal lupus, found the middle normal in only three. Most of the cases presented the characters of ordinary catarrhal or suppurative inflammation. Only in one case could the tuberculous bacilli be found. In the cases believed to be of the specific lupus nature there were patches of lupus in the naso-pharynx.

SCHWARTZE mentioned a case of lupus of the tip of the nose, rebellious to all treatment, in which there occurred later a suppurative inflammation of the middle ear and mastoid, and death in six months from pulmonary tuberculosis.

Dr. TRUCKENEROD (Hamburg).—*An Otitic Cerebral Abscess cured by Operation.*

The patient, aged fifty-four, had, after influenza, an acute inflammation of the left middle ear, which seems to have become infected by extension

from a furuncle in the meatus. Paracentesis was performed. In the subsequent course of the disease the fever was not characteristic. The highest temperature was 38.9 (102° F). Soon the patient became quite altered and very talkative. There came on paresis of the right facial nerve, twitchings and weakness in the arm, sensory aphasia, complete alexia, agraphia, and anarhythmia. There was no ocular paralysis, no retinal change, no giddiness, staggering, vomiting, slowing of pulse, no anæsthesia, and no difference of temperature on the two sides. The patellar and scrotal reflexes were preserved. There was, however, constant violent headache, localized in the right temple. Abscess in the left temporal lobe was diagnosed. The operation consisted in chiselling open the left mastoid, removal of the tegmen antri (when fresh inflammatory adhesions were found between the dura and brain), separation of the membranes, insertion of a syringe inwards, forwards and upwards till pus was found, incision with a knife, drainage and dressing. Complete recovery took place in three weeks.

Dr. SCHWARTZ considers that with the present day *technique* there is no danger in operating on cerebral abscesses. On the other hand, the diagnosis of the presence and situation of such abscesses is difficult enough.

September 22, 1891. Dr. PAGENSTECHEER *presiding*,

Prof. HABERMANN (Graz).—*On 'Disease of the Organs of Hearing following Tabes Dorsalis.*

In the majority of cases no pathologico-anatomical changes in the organs of hearing have been found.

Habermann describes the case of a woman, aged fifty-two, in whom the first symptom of tabes, twelve years before her death, was deafness, and whose hearing he had tested four weeks before she died. He found hearing for the C tuning-fork present, but deafness otherwise complete. The patient complained of buzzing in both ears, but no vertigo.

On *post-mortem* examination of the temporal bones there was found almost complete disorganization of the cochlear branch, which was nearly entirely replaced by connective tissue, containing many small corpora amylacea. The vestibular branch was also in an advanced state of degeneration. In the cochlea there was found, with the exception of a few fibres and ganglion cells in the lowest turn, only one bundle of fibres at the apex, where alone the organ of Corti was intact. In the nerves of the vestibule and semi-circular canals a great number of fibres were destroyed; a few preserved. The degeneration extended along the auditory nerve to the nuclei in the medulla, which were, however, normal.

Dr. SCHEIBE (Munich).—*A Case of Extensive Nerve-Degeneration in all the Turns of the Cochlea.*

Sections were shown through the left petrous bone of a physician of sixty-one, who had been very deaf, and whose dulness of hearing had begun twenty-three years before his death. The middle-car was otherwise normal, but by means of a manometer, placed in the upper semicircular canal, a diminished mobility of the stapes could be made manifest;

nevertheless, microscopical examination failed to show any distinct change in the stapedio-vestibular articulation. On investigation of the labyrinth by serial sections there was found complete degeneration of the nerve—only a few isolated fibres escaping—equally in all the turns. It was less in the nerve to the upper canal, the other nerve fibres being normal. The cochlea showed also post destructive and plastic changes, which were most striking in the uppermost coil, where also the bony framework was affected.

The question remains as to whether the latter changes arose from basilar meningitis six years before the commencement of the ear trouble, or from a disease of the bones—osteopsathyrosis—in the extremities, and osteomalacia in the vertebræ and spongy parts of the temporal bone. Perhaps the nerve degeneration may depend on morphinism, from which the patient suffered many years before dulness of hearing set in.

Dundas Grant.

(To be continued.)

AMERICAN OTOLOGICAL SOCIETY.

Twenty-fourth Annual Meeting ("Med. Rec.," Sept. 26, 1891) Sept. 22, 1891.

GORHAM BACON, M.D., President

Dr. H. KNAPP.—*Mastoid Inflammation.*

Two cases had been operated on. In one, after otorrhœa fatal meningitis occurred, and the autopsy showed that death had been preventable. Besides the aural there were intense cerebral symptoms, headache, nausea, giddiness, and stupor. In the fourth week Dr. Knapp chiselled into the mastoid process to the depth of fully half an inch, and finding no pus desisted. Slight relief supervened, but symptoms returned, and the patient died comatose in the eighth week. The autopsy showed diffuse purulent meningitis, a small abscess in the jugular fossa, and a collection of pus in the tympanic attic. The abscess in the jugular fossa was only separated from the surgical opening by a thin scale of bone, and Dr. Knapp thought that life might have been saved if the opening had gone three millimètres deeper.

In the second case there was persistent pain in the mastoid region, radiating over the head and neck to the clavicle. The upper part of the drum-membrane was red and bulging. Six weeks of treatment failing to give relief the mastoid was opened, but nothing was found except congestion of the bone and cells. Free scooping was carried out as far as the periphery of the drum cavity and the patient soon got well.

Dr. C. J. BLAKE (Boston).—*Free Opening of the Mastoid and removal of all Diseased Tissue.*

Twenty-three cases had been treated. After shaving, washing, and disinfecting the skin, an incision was made down to the bone and the soft parts were retracted. The bone was opened by means of a small drill, then a larger one and a chisel. All soft bone was cleared away by the use

of a sharp steel spoon, working from the dura if exposed. An incision was made in the posterior part of the membrana tympani, and weak sublimate lotion was driven through. Drainage was effected by frequent use of the probe. Dependence on incision down to the bone, and delay in adopting the more radical measures, had had fatal results.

Dr. GRUENING (New York), was guided chiefly by local tenderness. If all diseased bone is removed, it is not necessary to disturb the tympanic cavity. He uses a small chisel and the ordinary bone forceps or rongeur (gouge-forceps).

Dr. J. M. RAY (Louisville).—*Acute Suppuration of the Middle Ear.*

A case in which the affection was attended by septic meningitis and death. *Post-mortem*, there was no involvement of the bone, so that the process must have spread to the meninges through the general circulation.

Dr. B. A. RANDALL (Philadelphia).—*Otitic Epilepsy, Trephining and Fatal Septic Meningitis*

A case of otorrhœa with epileptic seizures of growing frequency. There was an aural exostosis nearly closing the canal. Exploratory trephining was performed behind the meatus without exposing abnormal tissue short of the denuded antrum and attic. No cholesteatoma. There was slow healing without trouble for fourteen days, when local pain and swelling returned, followed by severe headache, rapid deterioration, and death from meningitis on the twenty-first day. *Post-mortem*, there was purulent sub-arachnoid effusion of the entire convexity, with no trace of direct communication from the temporal bone. No lesion of the cerebrum or of the labyrinth was discoverable to account for the epileptiform convulsions, and the septic infection had to be ascribed to absorption along the trephining track.

Dr. GORHAM BACON (New York).—*Use of the Leiter Coil in Mastoid Disease.*

He had obtained very satisfactory results from its use in the early stage.

Dr. CHARLES H. BURNETT (Philadelphia).—*Excision of the Membrana Tympani and Necrotic Malleus for Chronic Purulent Otitis Media.*

Four cases were so treated. All ordinary treatment had been previously tried. The operation was performed under ether with electric head-lamp illumination. In the first, of twenty-five years' duration, suppuration was checked, and hearing power remained the same. The second had lasted six years; hearing improved greatly, discharge lessened. In the third—very chronic—the discharge and frequent pain disappeared, and the hearing greatly improved. In the fourth, of thirty years' duration, the discharge stopped, and the hearing improved to a very considerable degree.

Dr. THEOBALD (Baltimore).—*Healing of Old Perforations in the Tympanic Membrane.*

Some attempts to effect this had been partially successful. He preferred absorbent wool moistened with vaseline to other forms of

artificial membrane, and as means of stimulating the formation of new tissue to close the canal, he thought the addition of balsam of Peru to the vaseline had some influence.

Dr. THEOBALD.—*Dislocation of the Malleus Handle.*

An unusual case reported, probably of old standing and due to previous ear disease.

Dr. HUNTINGTON RICHARDS added some further points to his former communication on the *Anatomy of the Elephant's Ear*.

REVIEWS.

Schrötter, L. V.—“Vorlesungen über die Krankheiten des Kehlkopfs, der Luftröhre, der Nase und des Rachens.” 4^e Lieferung.

THE 23rd lecture treats of the traumatic affections of the throat, fractures by struggles, suicide, etc. The thyroid cartilage is broken in most cases. Diagnosis may not be possible, but crepitation is often made out. Incisions are treated, and also burns caused by internal or external influences. The author records two cases of divided epiglottis by uncovered knives when used for operation.

Lecture 24 deals with foreign bodies in the larynx. Methods of anæsthesia are detailed, and operative measures described. Lectures 26 to 28 deal with cicatrices and their consequences, stenosis, and deformities. Lectures 29 to 32 treat of benign neoplasms. The author deals particularly with catarrh considered as a factor in their production, or as a result. Of 100 cases 22 per cent. were females. The author strongly recommends that no uncovered knives be used.

The 33rd lecture deals with malignant tumours of the larynx. Sarcomata, rarer than the others, are not so malignant. He pays great attention to the immobility of the cord as an early aid to diagnosis, which is often difficult. The 34th lecture is upon ulcers and cicatrices. The author deals particularly with the differential diagnosis. *Michael.*

Massei, F. (Neapel).—*Pathologie und Therapie des Rachens, der Nasennöhlen und des Kehlkopfs.* “Nach der zweiten Auflage ins Deutsche übertragen, von Dr. Emanuel Fink” (Hamburg). 1^e Lieferung. (Pathology and Therapy of the Pharynx, the Nasal Cavities, and the Larynx.) German Translation of the Second Edition, by Dr. Emanuel Fink (Hamburg). Leipzig: Felix. 1892. 240 pages.

THE well-known book of Massei (see the report in this Journal) has been translated into German in a satisfactory manner. *Michael.*

Hankel (Glauchau). — *Handbuch der Inhalationen—Anæsthetica, Chloroform, Æther, Stickstoffoxyde, Äthylbromid, mit besonderer Berücksichtigung der strafrechtlichen Verantwortlichkeit bei Anwendung derselben.* (“Handbook

of Inhalation-Anæsthetics, Chloroform, Ether, Nitrous Oxide and Ethyl-Bromide, with special regard to responsibility in their application.") Wiesbaden: Eduard Jungklaass. 1891. 140 pp.

THE book in an extensive manner and with regard to the literature of the subject deals with the advantages, disadvantages, and dangers of the different anæsthetics, especially the differences in the effects of ether and chloroform, and the indications and contra-indications for their use. An extensive report cannot here be given, but the book may be recommended to specialists who have to perform operations in laryngology, and especially tracheotomy frequently and often in haste. The knowledge, therefore, of the different anæsthetics and their peculiarities—*e.g.*, the contra-indications of chloroform in heart weakness, of ether in diseases of the lungs, the advantages of nitrous oxide and ethyl bromide for short operations—is of great importance. A review of the literature of the subject concludes the book.

Michael.

Bresgen (Frankfurt-a-M.) "*Krankheits- und Behandlungs lehre der Nase und des Mundes, sowie des Kehlkopfs und der Luftröhre.*" Wien und Leipzig, 1891.

THIS work is called a second edition, but might well be looked upon as a new book. It is excellently written, and the views of others are impartially treated. A special feature of the work is the index. Nearly three thousand references are given. Every chapter begins with the literature of the special matter referred to. He endeavours in his new work to introduce terms which will exclude foreign words, and by this means confusion will be caused, not only to foreigners, but to Germans. He also writes in the new orthography, so that the spelling differs very much from what we are accustomed to. This reference is put in because a third edition will shortly become necessary, and it is very questionable whether in the interests of everyone the older method should not be adopted. The work in all probability will be indispensable to laryngologists.

Michael.

Bresgen (Frankfurt-a-M.).—*Ueber die Anwendung der Anilin-färbestoffe bei Nasen, Halse und Ohrenleiden.* (On the application of aniline colours in diseases of nose, throat, and ear). Wiesbaden: Eduard Jungklaass. 1891. 31 pp.

THE author repeats his recommendation of aniline colours for treatment of the diseases of the upper air passages, especially for after-treatment of galvano-caustic operations. He applies hexamethyl-violet (pyoktanin), and hexamethyl-violet in solutions of four per cent. to twelve per cent., and in the form of powder one part to ten parts zincum sozo-iodolicum or three to ten sozo-iodolnatrium. He also applies pyoktanin on cotton. The author also says that he has cured, by this medicament, very obstinate purulent discharges from the ear, and concludes with a review of the literature of the subject.

Michael.

Bresgen (Frankfurt-a-M.).—*Wann ist die Anwendung des Elektrischen Brenners in der Nase von Nutzen? Ein Mahnwort besonders an Nasenärzte und Solche, die es sein und werden wollen.* In what cases the application of galvano-cautery in the nose is of use. Wiesbaden: Eduard Jungklaass. 1891.

THE author condemns the abuse of nasal douche very often applied

without any object, and often dangerous for the ears. He concludes by speaking of the galvano-cautery by which, since the invention of the cocaine anæsthesia, it is possible to destroy all sorts of swelling and hypertrophy of the nasal mucous membrane, to remove enchondroses, and these without any damage if followed by good after-treatment, especially the application of pyoktanin. *Michael.*

Avellis (Frankfurt-a-M.)—"Cursus der Laryngoskopischen und Rhinoskopischen Technik." (Treatise on Laryngoscopy and Rhinoscopy), 131 pp. Berlin: Fischer.

THE first part treats of the different methods of illumination, with special regard to the new apparatus for direct illumination with electric light. Much too fragile, and therefore not agreeable to use. The use of the laryngoscope is very clearly described, with special regard to the elegance of the examination and surmounting of its difficulties in children. It concludes with the description of the application of the probe. The second part treats of the examination of the nose, describes the instruments, the method, the normal view, the application of cocaine in rhinospica, anterior and posterior. Concerning the latter, he recommends to examine the patient standing and with prominent head, and concludes with the examination of the accessory cavities, and the disinfection of the instruments. *Michael.*

Zuckermandl (Wien.)—*Anatomie der Mundhöhle mit besonderer Berücksichtigung der Zähne* ("Anatomy of the Mouth with special regard to the Teeth"), with 84 woodcuts, pp. 205. Wien: Alfred Hölder.

THE greatest part of the book treats of the teeth and their development, but there are also some researches on the nasal cavity and the antrum of Highmore, which will be of interest to us. *Michael.*

Obituary.

DR. ALFRED KRAKAUER.

AFTER a short illness, there died on October 19th the young specialist, Dr. Alfred Krakauer. Only in September he took an active part in the proceedings of our sub-section in the Naturforscherversammlung in Halle, and a report of this sub-section, which he prepared, and which will shortly appear, is his last publication.

Born in 1858 in Frankfurt-a-M., he studied in Berlin, München and Leipzig, and was promoted in 1882. The laryngological speciality he studied in Vienna, as a pupil of Schnitzler and Stoerk; then became assistant to Dr. Paul Heymann in Berlin, and for six years he had his own polyclinic. He was librarian of the "Laryngologischer Gesellschaft" in Berlin, and secretary of the "Collegialer Aerzteverein" in Berlin, and of

the otological sub-section in the tenth international congress. He published the following papers :—

"Tracheotomie und Tracheostenosen."—"Deutsche Med. Woch.," 1887, No. 5.

"Nasenpolyp bei einem 4 jährigen Kind."—"Deutsche Med. Woch.," 1885, No. 20.

"Recurrenslähmung und Influenza."—Laryngol. Gesellschaft, Feb. 7, 1890.

"Reflexneurosen der Nase."—"Deutsche Med. Woch.," 1884, No. 32.

"Intranasale Synechia und deren Behandlung."—"Deutsche Med. Woch.," 1890.

"Beschreibung Innerer Narium—Instrumente zur Behandlung der adenoiden Vegetationen."—"Berliner Klin. Woch.," 1887.

In spite of his youth, he had by great diligence and profound knowledge, combined with a rare modesty and great amiability, succeeded in obtaining the confidence of a great number of patients, and the respect of his colleagues. His loss is greatly to be deplored.

Michael.

NOTE.

WITH this number commences the incorporation with the other matter in this Journal of a section on *OTOLOGY*, edited by Dr. DUNDAS GRANT.

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PHARYNGO-MYCOSIS.

By HENRY BIXBY HEMENWAY, A.M., M.D., Evanston, Illinois, U.S.A.

Read before the Chicago Medical Society, Dec. 7, 1891.

UNDER the general term "pharyngo-mycosis" has been grouped a class of afflictions which often cause the general practitioner considerable trouble and annoyance. While some forms have been known and well recognized for years, others are still often overlooked, even by specialists. Text-books barely mention them. There are few articles in medical journals upon the subject. The nature of the trouble does not compel close study, and the majority of the cases fall into the hands of general practitioners rather than specialists; hence it is that most cases of pharyngo-mycosis are confused with other disorders.

Accuracy of diagnosis is ever desirable, but it may not always be essential for correct and successful treatment. This is not the fact with regard to the mycetes growing occasionally in the human throat. The differential diagnosis between mycosis and follicular pharyngitis is necessary for curative treatment.

The word mycosis has been more frequently used with reference to a form of skin disease. Dunglison in his "Medical Dictionary" gives no definition of the word alone, but mentions *m. famborsia*, *m. intestinalis*, and *m. vaginal*. Gould's "New Medical Dictionary" gives these definitions of mycosis, "a disease of the skin," &c., and "a mucous or polypoid growth." Billing's Dictionary gives no further light; Thomas' "Pronouncing Medical Dictionary" gives two definitions and two derivations

for mycosis. Deriving from the Greek *μῦκος* (mucus) a word which Stephanus¹ does not give, he says "a mucous polypus"; or taking it from *μύκης* (fungus), he says "a fungous fleshy tumour." The insertion of the word "fleshy" in the last definition is misleading, and makes the definition secondary. In no dictionary consulted did I find reference to pharyngo-mycosis, or a definition applicable to that condition.

Following the example of Dunglison, the "Century Dictionary" and others have given as the derivation the Greek "myces" and "osis" (using Roman type). This is not correct. There is no Greek or Latin word "osis" that could with any propriety be united with *myces* to form mycosis. Neither can I find any authority in either Greek or Latin for adding "osis" to a noun stem. Moreover, the stem of *myces* is not *myc*, but *mycet*. In Greek the ending *σις* (sis) is often added to a verb stem to form a noun; thus we have *σκληρόσις* (sclerosis) from *σκληρόω*, and *καταλυσις* (catalysis) from *καταλύω*. Hippocrates uses a verb *μυκῶω*, which has by the best authority⁴ been associated with *μύκης*, in origin and meaning. This, then, is the origin of the word mycosis.

Mycosis, therefore, is a fungus-bearing condition, and is to be distinguished from myces, and its plural mycetes, which refer to the fungi themselves. Pharyngo-mycosis signifies a fungoid condition of the pharynx. Since the tonsils are especially liable to be the seat of the parasite, we frequently find the more limited designation *tonsillo-mycosis*, or *mycosis tonsillaris*.

The forms of pharyngo-mycosis which have so far been recognized are those resulting from the growth of the *oidium albicans* (which has more recently been identified with the *mycoderma vini*, and the *saccharomyces albicans*), *nigrites linguæ*, *sarcinica*, *actinomyces*, *aspergillus fumigatus*, *leptothrix buccalis*, and the *bacillus fasciculatus*. By many the term is used only with reference to the last four of these forms. Thrush is a disease long recognized, and generally located in the mouth; *nigritis* is generally confined to the tongue. Since both are so well known, and so fully described in text-books, and since, further, their residence in the pharynx is accidental and secondary, I shall follow the example of others, and use the term in the more limited sense.

I have been led to give the above definitions and etymological remarks because, in the study of the case, of which the history is here given, I was misled by the dictionaries. After a most careful search I have been able to find only a very few references, in either books or journals, to pharyngo-mycosis. I described the case to several professional friends, not one of whom could give me any information. Pepper's "System of Medicine"² has a very short discussion upon the subject. Lennox Browne,³ in his third edition, devotes a portion of one page to "Mycosis Buccalis et Tonsillaris." The "Annual of the Universal Medical Sciences"⁴ also mentions it. Hutchinson⁵ speaks of *actinomyces* of the

¹ "Thesaurus Græcæ Linguæ," Stephanus, Vol. V., Paris, 1842.

² Vol. II., 1885, pp. 386 and 389.

³ "Diseases of Throat and Nose" (Lea Bros.), 1890, p. 258.

⁴ 1888, Vol. III., p. 284; and 1890, Vol. IV., p. 310.

⁵ "Diseases of the Nose and Throat," 1891, p. 42.

tonsil. Miller⁶ makes a few comments upon pharyngeal mycosis. Aside from a few bacteriological notes, articles by the following authors complete the bibliography of the subject, so far as I have been able to find : Vanderpoel,⁷ discussed⁸ by the Section in Laryngology and Rhinology of the New York Academy of Medicine, November 27, 1888, Newcomb,⁹ B. Fränkel,¹⁰ E. Fränkel,¹¹ Bayer,¹² S. Solis Cohen,¹³ Heryng,¹⁴ Grüning,¹⁵ Semon,¹⁶ Leyden and Jaffé,¹⁷ Ferré,¹⁸ Chiari,¹⁹ Siefert,²⁰ Goris,²¹ Gautier,²² Schech,²³ Töplitz,²⁴ Boland,²⁵ and Jacobson.²⁶ Among the large number of books consulted which do not mention the disorder, are such special text-books as those of Sajous and Mackenzie. Although the literature is meagre, I am satisfied that Dr. Delavan⁶ was not mistaken when he said, in discussing Vanderpoel's paper, that the affection was not uncommon. He had noticed in patients afflicted with this microphyte a liability to attacks of acute follicular amygdalitis. As a result of mistaken diagnosis many of these cases are wrongly, and hence unsatisfactorily, treated.

Case.—Miss K., student, aged twenty-three years, came to my office on April 13, 1891, to consult me about a suspicious white spot upon her left tonsil. She had a mild catarrh, and was subject to frequent attacks of "sore throat." Shortly before consulting me she "caught cold," and, as usual, she had a sore throat, which yielded to her usual remedies. A few days later she accidentally noticed the white patch above referred to, and, fearing diphtheria, she sought treatment.

She was slightly anæmic, had no fever, acceleration of pulse or respiration, or any other evidence of constitutional disturbance. Bowels regular, and urine natural. General health good. She said she felt no soreness of throat nor difficulty in swallowing. Teeth were in fair condition ; no cavities. Both tonsils were enlarged and slightly congested, especially the left, which was rounder in form. Upon the left tonsil there were two white patches, the largest being two millimètres in diameter, and its apex nearly a millimètre from the thickened surface of the mucous membrane. Both of these growths projected from the tonsillar crypts,

⁶ "Micro-organisms of the Human Mouth," 1890, p. 334.

⁷ "New York Medical Journal," Feb. 9, 1889, p. 147.

⁸ "New York Medical Journal," Dec. 29, 1888, p. 720.

⁹ "Medical Record" (N.Y.), Vol. XL., Aug. 29, 1891, p. 232.

¹⁰ "Berliner Klinische Wochenschrift," 1873, No. 8, p. 94; *ibid.*, 1880, No. 18, p. 263; *ibid.*, 1886, No. 23, p. 265.

¹¹ "Zeitschrift für Klinische Medicin," No. 4, 1882.

¹² "Revue Mensuelle de Laryngologie," Nov. 1882, p. 329.

¹³ "The Polyclinic," March, 1884, p. 133.

¹⁴ "Zeitschrift für Klinische Medicin," 1884, B. d. VII., Heft 4, p. 358.

¹⁵ "Archives of Laryngology," No. 3, 1882.

¹⁶ "St. Thomas's Hospital Reports," XIII., 1883.

¹⁷ "Deut. Arch. für Klinische Medicin," No. 2, 1887 (?).

¹⁸ "Journal de Médecine de Bordeaux," 1887 (?).

¹⁹ "Revue Mensuelle de Laryngologie," No. 10, 1887.

²⁰ "Revue Mensuelle de Laryngologie," March, 1889.

²¹ "Revue de Laryngologie," IX., 1889.

²² "Revue Médicale de la Suisse Romande," Jan., 1889.

²³ "Krankheiten der Mundhöhle," &c.

²⁴ "N.Y. Med. Press," No. 3, 1886-87.

²⁵ "Ann. Soc. Med.-Chir., Liège," No. 24, 1885.

²⁶ "Samml. Klin. Vortr. Leip.," No. 317, 1888.

the larger one being upon the upper back portion of the tonsil. Upon the right there were smaller spots, apparently flat upon the mucous surface. All of these patches, except the largest, resembled ordinary follicular pharyngitis, and I so pronounced the disease, though that one spot excited my interest. I prescribed a mercurial laxative, and a permanganate of potash wash.

A few days later the patient returned, and, much to my surprise, I found the patches larger instead of smaller. The largest spot looked very much like a pile of fly-blows. Its colour was white, with a slight cream tint. Its apex pointed upward, inward, and backward. It clearly grew out from a crypt, the mouth of which was forced widely open, leaving corners unfilled. With a pair of forceps I attempted to remove a little of the substance. There was no calcareous mass, but it was so tenacious that, as I pulled upon the apex, I drew the whole tonsil forward.

I removed a portion, and examined it under the microscope. It contained a few epithelial cells, but consisted chiefly of small rod-like bodies arranged in bundles. I informed the patient that her affliction was neither diphtheria, follicular pharyngitis, nor anything else with which I was acquainted. I was satisfied that the disease was local, and only local treatment would benefit her.

I then began a series of local applications, consisting of boracic acid, carbolic acid, a solution of thymol, eucalyptol and menthol, and tincture of iron. Some of these drugs were strong enough to cause local inflammation, but their direct effect upon the microphyte was negative. Indirectly they may have increased the growth by increasing the local congestion, as manure and cultivation increase field crops. The fungus thrived. Evidently the root of the microphyte was deep in the tonsil, and I doubted the ability of drugs to kill it, without endangering the patient. I therefore urged the use of the electro-cautery. To this the patient objected, especially since I could not tell the name of her disease. She made another appointment and withdrew. My last treatment was on May 5.

About five weeks later I received a note from her saying that at the request of her father she had been home to consult her family physician. This person condemned my treatment, and especially my recommendation of electricity. He told them that the disease was follicular pharyngitis. He prescribed *Tr. ferrichlor. et glycerina*, to be applied every two days with a camel's-hair brush.

Having by this time convinced myself that this was a case of mycosis, in response to a request the patient came to my office on June 20, and permitted the removal of another sample for study.

The largest mass had been broken off in the crypt. The mouth of the crypt was widely open, as though held by something deeply hid. The other growth on the same tonsil seemed smaller than before. On the right tonsil the spots were larger and more confluent. Though apparently on the surface, they were removed with difficulty. They did not come off like a membrane, but in pieces. There was also a small spot slightly in front of and below the tonsil. At this examination there was nothing to be noticed with the naked eye, which is characteristic of mycosis.

In July, as the result of exposure at a lawn party, the patient had acute tonsillitis followed by an abundant growth, samples of which were sent to me. She then used "Listerine," and on August 30 reported that the inflammation and swelling had gone, and that all the white spots but one had disappeared.

I suggested the use of a strong solution of Fairchild's glycerinum pepticum and hydrochloric acid. This seemed to have little or no beneficial effect.

August 27. The patient again wrote to me for advice. I repeated my recommendation of the electro-cautery, preferring, however, the action of the negative pole with a non-active positive pole, rather than the cautery snare, for reasons to be given later.

September 17. The tonsils were both very much smaller than when seen before. The right one was flat, and the other round in shape. Each showed several depressions, probably the result of the former growth of fungi, which had disappeared. Upon each there was one white spot, quite different in appearance from those before seen. The larger was upon the left tonsil. It occupied a depression half a millimetre deep and two millimetres in diameter. Apparently the fungus had a very broad base. It differed from the first large fungus seen on the left tonsil in being flat. It differed from the spots formerly seen on the right tonsil in being distinctly granular in appearance, rather than membranoid.

September 18. The patient went with her father to consult an eminent specialist in Chicago. He made no microscopic examination. He agreed in recommending the electro-cautery, which he then used. How deeply the tonsil was cauterized I do not know. The patient has since informed me, that although the specialist called her trouble "chronic follicular pharyngitis," she and her father were convinced that my advice given in April, as well as my diagnosis and prognosis in June, were correct, and that their family physician was mistaken in each.

I have given the above report somewhat at length, as a study of natural history. It shows the chronic character of the fungus, and its tendency to increase and decrease without special outside influence. It shows further the comparative uselessness of medical treatment. I have also attempted to give the characteristics of the growth as seen by the practitioner.

I attempted to make a culture of the bacillus, but my results were of little value on account of lack of facilities, combined with an accident. I inoculated four tubes. Two of the tubes contained gelatine and sugar, while the others contained gelatine without sugar. I found the characteristic growth in the tubes containing sugar, but did not find it in the other tubes. Lack of material prevented me from continuing that line of investigation. The cultivation tests need confirmation.

In my microscopical study I used as staining reagents aqueous solutions of methyl blue, aniline red, and potassium iodide and iodine, and the ordinary compound tincture of iodine.

Without staining, colourless filaments could be discovered with an amplification of 600 diameters. These filaments took the methyl blue

stain easily, and thus came out clear. In the first specimens examined these filaments were united in little bundles. These bundles branched, but I do not think the filaments ever branched. In many instances the filaments seemed to branch, but by a slight change of focus or by a higher power I was able to see a separation, showing that the appearance was accidental. In later specimens the filaments were less frequently found in bundles, though frequently found parallel. In earlier specimens there was little granular matter or epithelial plates. In later specimens the granular matter was very abundant, and epithelial cells or plates were not rare.

I have called this granular matter because it so appears. The particles have also been called spores and cocci, the last probably more correctly. In one or two slides I found bacilli with one end apparently enlarged, and surrounded by this granular matter. This led me to regard them as spores. Since, however, I found no such bacilli in either the earliest or the latest specimens the observation needs confirmation. I did not find the granular matter so arranged as to form a line with bacilli.

I frequently found the cocci, if such they are, arranged in an irregular broad band, from which projected, usually at a large angle, bacilli, as may be seen in Figs. 1 and 2.



FIG. 1.

The peculiar bacillus of this affection has, by Fränkel and Sadebeck, been called bacillus fasciculatus. I greatly regret that I have been unable to find a description of the bacillus under that name. A large majority of reporters have stated that the filaments are those of leptothrix buccalis. The best description of leptothrix buccalis, which I have seen, is that by Crookshank²⁷: "long thin threads 7—1 m. broad, colourless, "often united in thick bundles or felted together. Masses of cocci occur "with the threads. The threads themselves are composed of long rods, "short rods and cocci. The threads may break up into spiral-, vibrio-, "and spirochaeta forms. The last-named occur in large numbers in the "mouth, and have been named *spirochaeta buccalis*." The contents of the filaments turn violet with the iodine, while the sheath remains

²⁷ "Manual of Bacteriology" (Lewis, London), 1890, p. 361.

colourless. De Bary²⁸ says that different portions of the same filament may alternately assume blue and yellow colour with iodine. "The length also of the members (cells) is unequal in some cases, not exceeding the transverse diameter, in others several times greater." By aid of cultivation, we are informed,²⁸ Rasmussen²⁹ has distinguished three separate forms.



FIG. 2. *Bacillus fasciculatus*.

I regret that I have discovered no picture of the organism found in pharyngeal mycosis. I feel quite confident that in my case the bacillus is not *leptothrix buccalis*, for reasons to be stated. Newcomb says³⁰: "These link-like processes vary in length, and in some cases curl up at their ends into fine hair-like filaments." "Besides these spores there are

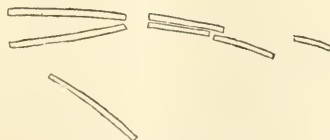


FIG. 3. *Leptothrix buccalis*.

"round, or oval, highly refractive bodies with dark borders, arranged in colonies or placed separately between *branching* spores. The whole goes to make up a network formation composed of spores and refractive granules." If his spores branch, do they belong to the *leptothrix* or *cladothrix* genus? He does not tell what power of lens he used. Van-

²⁸ "On Bacteria." Translation by Garnsey and Balfour. Clarendon (Oxford) Press, 1887, p. 120.

²⁹ "Über d. Cultur v. Mikroorganismen," &c., 1883.

³⁰ Op. cit., p. 233.

derpoel also says³¹: "These spores were unequally marked off into links, "*with numerous side branches*, and budding ends, separated from the "main stems by indentations or partition walls" (*italics mine*). The chief distinction between leptothrix and cladothrix is that leptothrix does *not* branch.

Another species of leptothrix (*L. gigantea*) is thus described by Crookshank²⁷: "Long rods, short rods, and cocci can be observed in the same "thread. . . . The threads increase in diameter from base to apex." My specimens do not answer to that description.

Leptothrix is very common in the mouth. It seems to be largely responsible for the decay of teeth. If the growths of pharyngo-mycosis are the result of leptothrix, why are they not more common? Leptothrix is found in large numbers on the gums, close to the teeth. Why, then, do we have these growths in the pharynx and nasal cavity, but not on the gums? I have not noticed the report of a single case in which the growth appeared on the gums.

The fact that leptothrix is often found in the growths is not sufficient evidence that the fungus is the production of leptothrix. Considering the frequency of leptothrix, it would be strange if it was not often found with the fungus. In my own examinations I found leptothrix, but the common and constant bacillus was of a different form—longer and much more slender. Leptothrix cells measured were seldom over 3 mm. long, but the bacillus of mycosis was much longer. Those measured varied in thickness from .4 mm. to .56 mm., and in length they generally averaged about 5 mm., but a few were found 16 mm. When I used the compound tincture of iodine as a staining reagent, the cells were broken up into much shorter ones. An idea of the relative appearance of the bacillus and leptothrix may be obtained by comparing Figs. 1 and 2 with 3. With the aqueous solution of iodine and potassium iodide some of the cells became blue. How constant that reaction was I am uncertain, as I made but few observations with that stain.

The bacilli do not show a tendency to form long threads, but often lie parallel. They do not form spirals as is often seen in the cladothrix, but they do sometimes bend, even in some cases forming almost an ellipse. (See Figs. 1 and 2.) Generally they are quite straight.

Have the bacilli the power of locomotion? I suspect so. I did not see them move, but I frequently noticed that a freshly prepared specimen had the bacilli in a different arrangement from that shown in the same slide a few hours later. Soon after mounting one of my latest specimens in balsam, I found a beautiful field, in which there were a large number of the bacilli lying close together in a large bundle. After examining them for a time I was called away. Before leaving I made sure that this fascicle was in good focus and in the centre of the field. No one had access to the room except myself, but I have never since been able to find that bundle of bacilli.

Since the bacilli do show a tendency to form fascicles, until I find that they do not conform to Sadebeck's description I shall continue to call them bacilli fasciculati.

³¹ "New York Medical Journal," 1889, p. 148.

Pharyngeal actinomyces and aspergillus are more rare. For a description of each I would respectfully refer to text-books on bacteriology. Sarcinica are easily recognized by their cell division—round cells splitting into four, and each of these into four more. While they are undoubtedly found in the throat it may be a question if their residence there may not be secondary, as the result of stomach disorders. There is good reason for believing that when aspergillus is found in the throat, it has reached that location through the Eustachian tube from the ear. It has also been found in the lungs.

Etiology.—The etiology of pharyngo-mycosis is decidedly uncertain. There seems but little doubt, however, that catarrhal inflammation is a predisposing cause, furnishing suitable ground for the cultivation of the fungus. Mouth-breathing, a frequent accompaniment of catarrh, brings the air directly upon the tonsil without being filtered by the nose. This was present in my case to a moderate degree. It has been noticed as a sequel to rheumatic amygdalitis. A hypertrophied tonsil is especially liable to be the seat of the fungus. It is much more frequent in females than males, perhaps because they are more confined, and so have less pure air. Solis-Cohen's case occurred in an insalubrious locality, surrounded by diphtheria. Other observers have mentioned damp walls and surroundings as favourable for the growth of the fungus. I know of no investigations which show how or where the germ originates. The resemblance of the bacilli to several forms found in water, especially in water from marshes, suggested to me the possibility of such a course of infection. The home of my patient, and her temporary place of residence here, are in healthy communities. Lennox Browne³ mentions an unhealthy skin, as from the use of cosmetics, as a cause of pharyngeal mycosis, but such a cause must be very remote, simply predisposing to pharyngeal congestion. On the leptothrix theory of mycosis, dental caries has been mentioned as a cause.

Symptoms.—The subjective symptoms of pharyngo-mycosis vary from a very slight tickling sensation to a decided feeling of obstruction. Sometimes nothing is felt. At other times a decided local inflammation is produced, accompanied by the usual symptoms of tonsillitis or pharyngitis, such as pain, fever, etc. The irritation of the fungus frequently produces a hacking cough, sometimes associated with vomiting. The voice is sometimes slightly altered. Constitutional disturbances, if felt at all, are secondary results of the tonsillitis. Asthma is sometimes present.

Objectively, we see spots upon the pharyngeal wall, or around the circumvallate papillæ of the tongue. These spots vary in colour from white to cream or yellow. When circumscribed upon the tonsils they are seen to grow from the crypts. They are very tenacious, not easily torn off, and when removed by the forceps they are rapidly reproduced in the same locality, sometimes within twenty-four hours. Generally the growth is in the form of filaments or tufts, sometimes confluent in a form of membrane. Normally the mucous membrane around the fungus is natural in colour.

Mycosis is differentiated from diphtheria by its chronic nature ; by less tendency for the fungus to spread ; by absence of fever and symptoms of systemic disturbance (except when accompanied by tonsillitis) ; by

absence of the diphtheritic odour ; by absence of pain ; and by the form of the fungus. When in the membranoid form it does not come off as a membrane, but breaks in pieces. When removed it sometimes leaves bleeding spots, but the mucous membrane is not so much denuded as in diphtheria.

In follicular pharyngitis the contents of follicles are easily expressed. The calcareous concretions sometimes found in chronic follicular amygdalitis often project from the crypts, but they also are easily expressed. Though in follicular inflammations the accumulations frequently contain leptothrix threads, they are not composed of the filaments. The only sure method of diagnosis is by the use of the microscope.

Prognosis.—The affection is more troublesome than dangerous. It is peculiarly annoying on account of the liability to frequent attacks of acute amygdalitis. The fungus is slowly destructive of the tissues on which it grows. In E. Fränkel's case the bacilli penetrated the tonsil some millimètres. Spontaneous cures sometimes occur, but usually the trouble is chronic, the fungi appearing in successive crops. The fungus may be implanted upon the nasal mucous membrane, or in the lungs. Located in the bronchial tubes the fungus might easily produce an extremely annoying bronchitis. The same result might follow as a result of the coughing from pharyngeal irritation. The cure of bronchial or pulmonary mycosis is a practical impossibility, except by surgical treatment.

Treatment.—The only successful and certain treatment is the thorough use of the thermo or galvano-cautery. There are obvious objections to the former. It has been stated that the bacillus thrives best in an acid medium. If this be true the use of the positive galvanic pole, with a large negative cutaneous electrode, should be more efficient than the galvano-cautery ordinarily used. Added to the local cauterization we then have the antacid action and the deep tonic effect upon the tissues.

Semon¹⁶ claims to have cured his case with chlorate of potash and tannic acid, and Siefert²² cured his with a gargle of sodium borate and ice. These results are so different from those of others that their diagnosis is questioned. Miller³² says : "The strongest antiseptics do not exert the least influence on the course of the disease." Vanderpoel³³ testifies : "I have not obtained any results from the use of the bichloride or of carbolic or acetic acids, and only partial success from applications of "chromic acid fused on a stick." Newcomb³⁴ reports : "Alum and "sulphur are useless. Silver nitrate answered well in two cases which "were especially tolerant to its use, but a relapse occurred six weeks "later." Ferric salts have been useless. Smoking is said to have cured one case.³⁴

The two photographs here presented, though far from perfect, may aid some investigator. Both are taken with the heliostat, with 15 sec. exposure ; freshly mounted, moist, using aniline red as staining reagent. The method failed to give as accurate definition as might be desired. The use of sunlight, combined with the wet mount, makes the bacilli appear much thicker than they are in proportion to their length.

²² "N. Y. Med. Journ.," 1909, p. 331.

³³ Op. cit., p. 140.

³⁴ Op. cit., p. 234.



FIG. 4.
Bacillus fasciculatus from Pharyngo-mycosis. $\frac{1}{2}$ Wales objective. Plate 6 ft. distant.
Sunlight, 15 seconds.

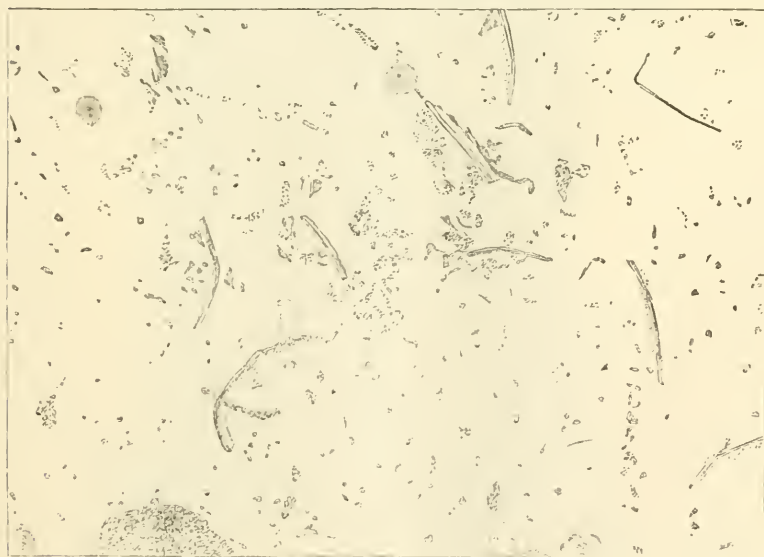


FIG. 5.
Bacillus fasciculatus from Pharyngo-mycosis. $\frac{1}{2}$ Wales objective. Plate 6 ft. distant.
Heliostat time, 15 seconds.

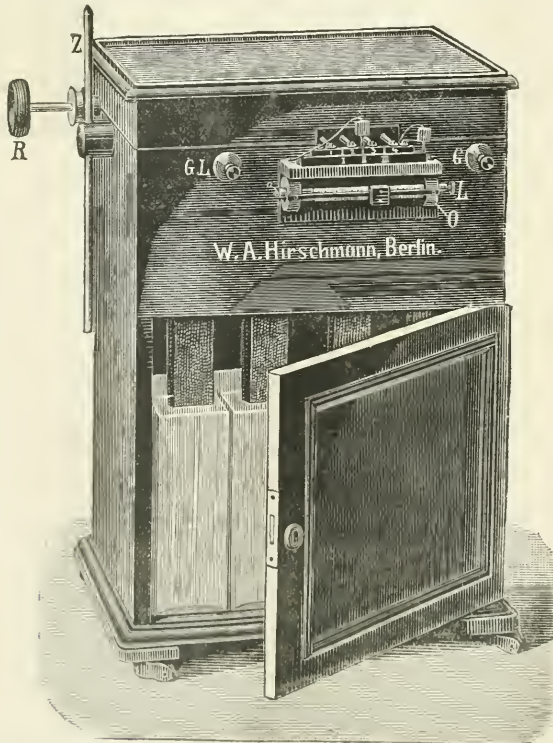
[NOTE.—In the discussion following the reading of the paper, Dr. George Webster, of Chicago, mentioned a case then under his care. It

was that of a law student. When first seen the tonsils, entire pharynx, and even the epiglottis were covered with the microphyte. Many of the growths were over half an inch in length. Dr. Webster excised the tonsils, and by the aid of the galvano-cautery, combined with the hyposulphide of sodium, he is slowly conquering the growth.]

THE ELECTRIC LIGHT IN ANTRAL DISEASE, ETC.

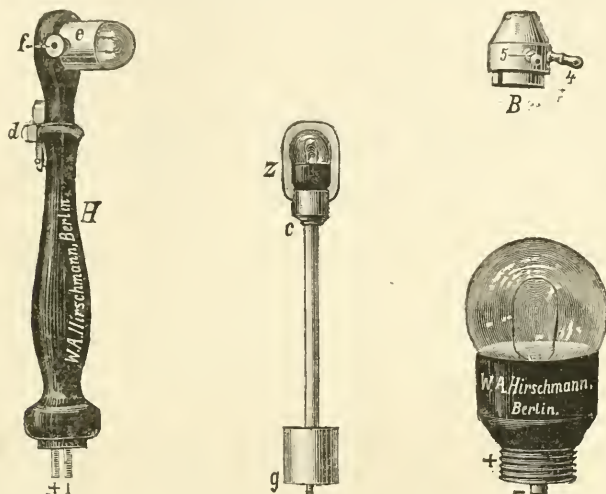
By WILLIAM ROBERTSON, M.D., Surgeon Throat and Ear Hospital,
Newcastle-on-Tyne.

AN account of the two following cases of antral disease reported before the Newcastle-on-Tyne Clinical Society, with special reference to and emphasizing the efficiency of the electric light as a ready and reliable diagnostic measure in antral disease, may not come amiss, more especially now, when it seems to be acknowledged that antral disease exists in

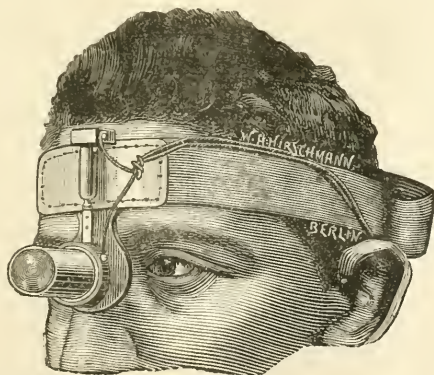


a latent form much oftener than has hitherto been supposed—*e.g.*, Gradenigo (*JOURNAL OF LARYNGOLOGY*, Nov. 1891, p. 468) found on

examining 103 subjects nineteen cases of empyema of maxillary sinus at the autopsies. Such being the case, a ready means, painless on application, of diagnosis becomes imperatively necessary. As a matter of routine, the practitioner is not to be found who would, even were he allowed to, adopt the diagnostic measures recommended at the present time—puncturing antrum through lower nasal fossæ, etc. Even the use



of a syringe to explore *per viam naturalem* creates difficulties with nervous patients. No such objections belong to the use of the electric light in the mouth, and if in time and after matured experience with



improved instruments full reliance is found possible, a great gain will be secured, for the use of the lamp does not end with Highmore's antrum, for, as is well known, it equally well clears up any doubt as to disease in the frontal sinuses, and, if I mistake not, it affords very plain evidence of the existence of ethmoid disease. If such things are possible with the light, I certainly fail to understand how it comes to be spoken of as "a

refinement of diagnosis, and of no practical value." I admit its refinement, and shall in the following remarks endeavour to set out its practical value.

It is a *sine qua non* in this connection that a good instrument be employed to carry the lamp, and that the lamp itself gives a sufficiently powerful illumination. I have found the recently improved holder and lamp sent out by Hirschmann, Berlin, all that can be desired. His battery of 8 large cells (single fluid chromic acid) = 16 volts gives a steady current, and is exceptionally reliable. The lamp is about the size of an ordinary marble, of 4 candle power, or nearly so. Resistance, hot 8·8 w., cold 16·16 w., thus requiring regulation of current. The pressure required is 10·3 volts, with a current of 1·18 amperes to light it. Roughly speaking, the 8 cells of the battery will give 16 volts, so that there is a large reserve of energy easily regulated by the resistance coil furnished with the battery. The handle is provided with a switch, so that the current need not be turned on until the lamp is placed on the patient's tongue and the lips closed. The lamp in the mouth gives rise to no unpleasantness during the short time necessary for diagnosis. Hirschmann, however, provides an irrigator for the lamp, so that no heat whatever is perceptible, no matter how long its use is required. A special requisite in applying the test is perfect darkness of the chamber where it is used, the least trace of light interfering with the finer—I should say "refined"—details of the illumination to be made out.

The diagnostic points in the case of antrum illumination rest on the appearances under the lower eyelid and intra-narem. In health there is seen, under the lower lid, a large light spot about the size and shape of an ordinary almond. If this is definitely developed then the antrum is sound. To proceed: a more subdued illumination exists over the rest of the antral region, the lips and cheek being equally illuminated, with a light spot under the eye.

In a case of extensive lupus of the nose, palate, etc., the several areas of deposit in the nose and cheeks were remarkably well brought out when the lamp was placed in the mouth, a point in diagnosis in such cases which might well be put to account. Every sclerosed area in the cheek showed out in dark shadow, and areas were discovered in this way that were not visible under ordinary circumstances, and by a means less objectionable than the tuberculin injection.

Where the lamp is in the mouth, by the help of the nasal speculum, the inferior and middle turbinates are clearly illuminated, *i.e.*, in health (the floor of inferior meatus, next the septum, showing a clear spot present both in disease and health). In well-developed disease of the antrum (empyema) the whole area of cheek corresponding to the antrum is in the blackest shadow, no light spot under the eye and intra-narem, the inferior turbinates especially are in dark shadow. It has been said that in some cases in health the outer antral area is often dark. In such cases we fall back on intra-nasal examination, which serves as a check to clear up the case.

In the case of frontal sinus disease, the lamp placed well under the orbital ridge throws out a dark shadow, extending accurately up to anatomical demarcations.

As regards ethmoid disease, I have remarked two bright strips of

illumination parallel to each other, one on each side the middle line in the cartilaginous area of the nose in health. These I have found replaced by dark shadow in several cases where the middle turbinateds were pathological and pus exuding from their neighbourhood.

So far as my own experiences goes, I have found the light reliable, *i.e.*, I have operated on the strength of its disclosures, and have not yet been misled.

NEW INSTRUMENTS, THERAPEUTICS, AND DIPHTHERIA.

Morison, Alexander (London). *Improved Tonsil Guillotine*. "Lancet," Jan. 9, 1892.

DR. MORISON'S instrument has the handle lower down on the shank than in the guillotine generally used (Mackenzie's). The blade has a concave instead of a convex (or lancet-shaped) cutting edge, and the end of the frame is nearly square instead of round. [The modification in the handle seems to recommend itself more particularly if it be desired to operate with one hand—which is quite unnecessary—and it will be seen that the very long, oblique diameter of the fenestra, downwards and backwards, adapts it for the removal of the long down-growing tonsils, which often offer difficulties. Experience alone can prove these points.]

Dundas Grant.

Cheval (Brussels). — *Electro-thermo Cauteries*. "Journ. de Médecine de la Bruxelles," Oct., 1891. "Electrician" (Review), Dec. 25, 1891.

DR. CHEVAL recommends accumulators, but the reviewer in the "Electrician," while allowing their superiority for consulting-room work, thinks that the modern portable sealed primary batteries are preferable for use at patients' houses. He further points out the advisability of avoiding the discharge of accumulators at an excessive rate through big cauteries of low resistance. Dr. Cheval insists on the copper leads being of sufficient thickness, a point often neglected. He considers iron vastly superior to platinum as being (1) more easy to heat, (2) firmer and stiffer, (3) cheaper. To prevent oxidation the iron wire may be silvered. The resistance of iron increases much more in proportion to its rise in temperature than does that of platinum. [The difficulty found in twisting steel-wire round the fastenings of a snare may be obviated, according to McBride, by heating the attached ends in a spirit-lamp.]

Dundas Grant.

Hellier, J. H. (London). — *A Hot-Water Bag for the Throat*. "Brit. Med. Journ.," Dec. 26, 1891.

"A VERY convenient way of applying heat to the throat is to use a hot-water bag about fourteen or fifteen inches long, and three and a half to four inches wide. It must have a loop at each end, so that it may be

"tied in position from ear to ear by the tapes passing over the vertex." The author says that his patients prefer it to the usual fomentation. It is made by Messrs. Reynolds and Branson, Leeds. *Hunter Mackenzie.*

Allen, C. W. (New York).—*The Tannate of Mercury in the Treatment of Syphilis.* "Med. Rec.," Jan. 2, 1891.

THE tannate is precipitated from a solution of nitrate of mercury by tannate of sodium. Allen gives it at first in doses of half a grain thrice daily. This is increased to the point of toleration, and then again diminished. He claims for it (1) stability; (2) ready assimilation and elimination; (3) safety with relatively large quantities; (4) less tendency to salivate than calomel or the protiodide; (5) less tendency to cause diarrhœa than the bichloride or the protiodide; (6) toleration by children in doses of one-third of a grain to two-thirds of a grain per diem; (7) stability in the stomach and non-decomposition prior to entering the small intestine. [Allen lauds it over the protiodide rather than over the grey powder.]

Dundas Grant.

Soble, M. D. (Rochester, N.Y.).—*Atropine in Hemoptysis.* "Med. Rec.," Jan. 2, 1892.

FULL doses of atropine diminish blood-pressure by dilating the peripheral systemic vessels. In this indirect way they lower the tension on the pulmonary arterioles—not by direct vasomotor nervous action. Small doses have an effect more or less contrary to this. In severe hæmoptysis Soble gives enough atropine hypodermically to produce full dilatation of the pupils as rapidly as possible. This may be one-sixtieth of a grain, repeated, if necessary, in an hour. The later doses may be combined with a little morphine to check the cough. He has used this treatment four times.

Dundas Grant.

Paris Correspondent of the "Lancet."—*Cocaine as an Anæsthetic.* "Lancet," Jan. 9, 1892.

IN the Société de Chirurgie, on the 23rd of December, the safety of subcutaneous injections of cocaine was discussed.

M. Quenu used in sixty cases a two per cent. solution, the maximum quantity injected being seven centigrammes (about one grain). In three he had disquieting symptoms: in one, formication of the extremities, anæsthesia, and finally cerebral excitement. M. Schwartz, in three hundred cases, had had no accident. For the limbs his maximum dose is seven centigrammes, for the tunica vaginalis ten centigrammes, and for the face and trunk five centigrammes. Esmarck's bandage, by retarding diffusion, affords tolerance for larger doses. M. Regnier observed two cocaine accidents, both in "cardiac" patients, one of whom developed cardiac failure and died a month later. The dose was only one centigramme (about one-sixth grain). He thinks concentration of solution is dangerous, and that one per cent. is strong enough. M. Reclus has used it over one thousand times, with very little anxiety. [The abstractor has used it frequently in dose of one grain—several times for tracheotomy—without any untoward result.]

Dundas Grant.

Stickler (Orange, N.J.)—*Beware of the Free Use of Cocaine in Hay Fever.* "New York Med. Journ.," Oct. 31, 1891.

THE reasons for the warning given are :—

1. May cause great depression of vital powers.
2. Seriously impairs appetite.
3. May produce insomnia.
4. In some people it acts as a powerful diaphoretic.
5. It may cause troublesome congestion of the nasal mucous membrane.
6. Its effects in stopping sneezing being only temporary, in bad cases it must be used very often.
7. It alters the temper, causing mental depression and irritability, &c.
8. It causes constipation.
9. It does not cure hay fever.

B. J. Baron.

Smith, G. Cockburn (Kensington).—*Prevention of Cocaine Poisoning.* "Brit. Med. Journ.," Dec. 5, 1891.

PREPARATION of the patient is recommended, by giving him a drop of a one per cent. alcoholic solution of trinitrine one minute before administering the cocaine, and repeating the dose at intervals if the pulse be not affected, and neither pain nor fulness in the temporal region be experienced. Attention should be paid to the type of patient. It is pointed out that in the neighbourhood of the face it is unsafe to inject hypodermically more than two centigrammes (one-third of a grain), and that not more than from four to five centigrammes should be allowed to come in contact with a mucous surface.

Hunter Mackenzie.

Editors of the "Lancet." *Death under Chloroform.* "Lancet," Jan. 9, 1892.

A CASE of death of a carman, of full habit, addicted to drink, with emphysematous lungs and thin, fatty heart. The anæsthetic was administered in order that the source of bleeding from the bowel might be investigated. The breathing was observed to stop suddenly (an inhaler, with Krohne's patent respiration indicator, was used), but the pulse continued for a time. Every means was employed, and the failure of attempts at resuscitation appears to have been due to the comparative rigidity of the chest walls and the saturation with chloroform of the large amount of "residual" air. [This case is not so much an argument against chloroform as against its use in emphysematous subjects.]

Dundas Grant.

Editors of the "Lancet."—*Prof. Bobroff on the Treatment of Chloroform Accidents.* "Lancet," Jan. 9, 1892.

PROF. BOBROFF recommends the subcutaneous injection of "normal saline solution" (0·6 per cent.) of common salt in case of failure of the heart's action during chloroformization. If only a moderate amount of blood has been lost before symptoms of danger show themselves, an ounce or so suffices ; but in anæmic patients, or after considerable loss, three and a half to seven ounces may be required. Absorption of the fluid readily takes place, but manipulation of the part facilitates it. The fluid may be made alkaline by the addition of 0·05 per cent. of caustic

soda. The other most valuable remedies are, he considers, lowering the patient's head, galvanizing the vagus (!), and Sylvester's method of artificial respiration.

Dundas Grant.

Beverley Robinson (New York).—*Notes on General versus Local Treatment of Catarrhal Inflammations of the Upper Air Tract.* "Med. News," Oct. 3, 1891.

THIS was a paper read before the American Climatological Association, and in it the author expresses the opinion that nasal obstructions *per se* do not require treatment, but if a source of disease the lining membrane must be removed. The nasal douche is a two-edged sword. Oily sprays are recommended. Liver and stomach troubles must always be considered as causes of nasal hypertrophy, etc., as also rheumatism and gout. Enlarged lingual tonsil is often the cause of so-called globus hystericus, and the cough of hysteria, anæmia, etc., is frequently due to this cause. Lithæmic conditions may act as a cause of enlargement of the lingual tonsil.

B. J. Baron.

Lincoln (New York).—*The Use of Pyoktanin in Diseases of the Upper Air Passages.* "New York Med. Journ.," Oct. 31, 1891.

AFTER quoting a number of authors who have published results of the use of this drug, the author relates his own experience.

When used in solution it ought to be prepared every three or four days and kept in coloured glass bottles. Four cases of empyema of the antrum were treated with it with good effect. Also in suppurative ethmoiditis, after dead parts were removed, it quickly caused healing; in fact, whenever there is suppuration and ulceration of mucous membrane present, it is of value, whether syphilitic, aphthous, or simple. A fifty per cent. solution is good in acute and chronic follicular inflammation of the tonsils. Lincoln has used it in two cases of diphtheria; rolls of cotton wool soaked in a ten per cent. solution were placed in the nostrils at night, and did so much good that it was afterwards used more extensively with great benefit. He likes it in membranous rhinitis, and also in non-specific ozena.

[I have found it valuable in a case of lupus of the soft palate and naso-pharynx with ulceration, the ulcers beginning to heal soon after it was thoroughly rubbed into them.—*Rep*]

B. J. Baron.

Laker (Graz). — *Die Heilfolgen der inneren Schlampuntmassage bei den Chronischen Erkrankungen der Nase, des Rachens, der Ohren und des Kehlkopfs.* ("The Curative Effects of Internal Massage of the Mucous Membrane in Chronic Disease of the Nose, the Pharynx, the Ear, and the Larynx.") Leuschner und Lubensky. Graz, 1892.

THE author has applied vibration massage to the nasal mucous membrane in many cases, and has found the method invented by Dr. Braun in Trieste to be very useful and give excellent results.

Michael.

Strubing (Greifswald).—*Therapy of Diphtheria.* "Deutsche Med. Woch.," 1891, No. 48.

REVIEW of the different treatments of the disease, only such cases being regarded in which Loeffler's bacilli were found. The author recommends

beginning with all treatment as early as possible, because the chances are better in the earlier stages of the disease. He recommends hydrargyrum cyanatum, and for diphtheritis scarlatinosa caused by streptococci local treatment with carbolic acid. *Michael.*

Güntz (Dresden).—*Ein Heilmittel für Diphtheritis.* (Cure of Diphtheria.) Arnold, Dresden, 1891.

RECOMMENDATION of internal use of chromic water. *Michael.*

Parisot.—*Treatment of Diphtheria by Irrigations of Salicylic Acid.* "Boston Medical and Surgical Journal," Oct. 15, 1891.

THE author is quoted in an editorial as recommending and using successfully irrigations of the following mixture :—

Acid, salicylic	1 part.
Water.....	980 „
Alcohol (90 per cent.)	20 „

The irrigation is made by means of a fountain syringe, the patient being held with the head over a vessel. The quantity used is about three or four ounces, and the frequency is guided by circumstances, but it may be very often in bad cases. It is alleged that false membranes thus detached form slowly and imperfectly again. Berthold, of Dresden, Mozard and Bergerm, Gouthem, d'Espiné, and Picot are all quoted in the editorial as favourable to the use of this drug. Weise is also mentioned as using frequent topical applications of the same substance with great advantage.

B. J. Baron.

Barbier (Paris).—*The Treatment of Diphtheria.* "La France Médicale," Jan. 1, 1892, and "Lancet," Jan. 9, 1892.

FOUNDING on the investigations of Klebs, Loeffler, Roux, and Yersin, which show that the bacillus is confined to the false membrane, and does not penetrate either the blood or the tissues, Barbier recommends detachment of the membrane by means of cotton wool on forceps (so as not to cause an excoriation on which the bacillus may breed), then the application of carbolic acid or, better, of a mixture of sulphovicianic acid (100) and carbolic acid (20) every hour during the day, and every two hours in the night. Before each application the naso-pharynx has to be irrigated with warm water, to which a small quantity of a 1 to 40 alcoholic solution of salol has been added. He advises the internal administration of calomel and naphthol to promote antiseptis in the intestines, vitiated by the swallowing of false membrane, etc. General tonic treatment, fresh air and sunlight, and the avoidance of close rooms and steam, complete his recommendations. [At a recent meeting of the British Laryngological Association the abstractor related the satisfactory experience of treatment founded on the same principles as that of M. Barbier, but the views expressed were by no means unanimously accepted.]

Dundas Grant.

Jayne (Georgetown).—*An Experience with Diphtheria at a high altitude.* "Med. News," Oct. 3, 1891.

THE author reviewed sixty-eight cases treated in the Rocky Mountains at an elevation of 8500 feet above sea level. The death-rate was moderate

The fatal cases were mostly those in which extension to the nasal cavities occurred, which happened in one-half the cases. The degree of dampness of air and soil probably had some influence on the type of disease, humidity being favourable to the development of the bacillus. The degree of elevation, *per se*, is not a determining factor.

Dr. Rogers, of Denver, advised early treatment of the nares. Moisture favours the disease, which is most common in Colorado as the snow melts. He prescribes iron and mercury.

Dr. Glasgow, of St. Louis, has lost twelve cases during the past twelve months, which he ascribes to the use of mercury. He prescribes peroxide of hydrogen.

B. J. Baron.

Wynne, E. T. (London).—*Diphtheritic Dysentery*. "Brit. Med. Journ.," Dec. 19, 1891. Path. Soc. of London, Dec. 15, 1891.

CARD specimen.

Hunter Mackenzie.

Drobnik.—*Twenty Tracheotomies performed during 1890 in Posen, with Remarks as to the Treatment and Course of Croup and Diphtheria*. "Nowiny Lekarskie," Nos. 5 and 6, 1891.

IN twenty cases one-half ended successfully—a relatively good result, considering that most of them were serious.

The results of treatment in croup by tracheotomy depend on several causes. To these latter belongs a kind of diphtheritic infection. It is known that, besides very slight forms of diphtheria, we meet with very grave ones; there are also transitory forms. Malignant epidemics, according to the author's experience, happen mostly in spring, whereas in autumn they are slighter. For the most part, the presence of streptococci complicates in a very dangerous manner a pure infection with Loeffler's bacilli, although these latter also differ in their malignancy. The symptoms of croup may appear in the course of benign as well as malignant diphtheria. There tracheotomy not only saves the patients from suffocation, but directly acts in a therapeutic manner on diphtheritic ulcers of the larynx, relieving the superfluous, though insufficient, function of the larynx. The same is not to be expected in grave (septic) cases. It is impossible by tracheotomy to prevent the inflammation of the kidneys, or paralysis of the vagus nerve; yet the patient may be spared pneumonia by an early performed tracheotomy, and this likewise in cases of the so-called diphtheritic pneumonia, especially when the membranes do not reach the thin bronchi. As to the post-operative treatment, the author very deservedly speaks against the abuse of feathers in cleaning the canulas. In the treatment of diphtheria the author uses with success liquor aluminii aceticum (one to four parts of water) for inhalations, as well as for brushings in graver cases.

J. Sedziak.

NOSE AND NASO-PHARYNX.

Goodhart, F. (London).—*Common Neuroses*. "Brit. Med. Journ.," Dec. 12, 1891. Harveian Soc., Nov. 26, 1891.

UNDER this heading the author first dealt with paroxysmal sneezing, regarding which he remarked that, occurring as it did in the neurotic, it was not probable that any good result could accrue from severe local measures. Angina clericorum could, in the experience of the author, be efficiently treated by a mere "good tonic, and an honest assurance that there was nothing serious the matter." "Cold catching" and asthma were to be treated on the same lines—by tonics and assurances. [Treatment on the author's "lines" will, we fear, seem somewhat antiquated to our readers.—*Abstractor*.]

Hunter Mackenzie.

Trevelyan (Leeds).—*Sebaceous Adenoma of Nose*. "Brit. Med. Journ.," Dec. 19, 1891. Leeds, &c., Med. Chir. Soc., Dec. 4, 1891.

EXHIBITION of microscopical sections.

Hunter Mackenzie

Bronner, A. (Bradford).—*Atrophic Rhinitis*. "Brit. Med. Journ.," Dec. 26, 1891. Bradford Med. Chir. Soc., Dec. 15, 1891.

EXHIBITION of cases of the fœtid and non-fœtid variety.

Hunter Mackenzie.

Wagner (Halle).—*Rhinolith*. "Münchener Med. Woch.," 1891, No. 47.

THE author removed a rhinolith from a patient thirteen years old, the first symptoms of which, consisting of fœtid rhinitis, had begun when the patient was in the second year. After removing the stone there was a cubical hole on the lateral side of the nose, caused by the increasing size of the stone having made an impression on the upper jaw. The fœtid rhinitis ceased after the removal, but recurred a short time later, but has now been cured by insufflation of boric acid.

Michael.

Liewen (Würzburg).—*Etiology of Rhinitis Fibrinosa*. "Münchener Med. Woch.," 1891, Nos. 48 and 49.

BY cauterizing the nose of a man with trichloroacetic acid, the author produced a wound which he infected with staphylococcus, and so produced an artificial rhinitis fibrinosa.

[I must remark that it is to my mind most improper to perform such experiments upon man, and to produce infectious diseases of the human body, especially as the results are of very slight interest.]

Michael.

Scheinmann.—*Rhinitis Fibrinosa*. Verein für Innere Medizin in Berlin. Meeting, Nov. 16, 1891.

SCHEINMANN showed the membranes of rhinitis fibrinosa. He has found no bacteria.

LEYDEN also found no bacteria in such membranes.

HENOCH says that it is easy to discover Loeffler's bacteria in membranes. Such cases as those demonstrated are cases of prolonged diphtheria, in which very chronic membranes are produced. *Michael.*

Hessler (Halle).—*Affections of the Ear following Simple Operations in the Nose.* "Münchener Med. Woch.," 1891, No. 50.

In nine cases of operations upon the nose, such as galvano-cauterization of the turbinateds and operations upon the deviated septum, the author saw subsequent inflammations of the ears, and therefore warns us to operate in the nose only where the indications are well marked.

Michael.

Wagner (Halle).—*Diseases of the Brain following Simple Nasal Operations.* "Münchener Med. Woch.," 1891, No. 51.

In a patient twenty years of age, on account of headache, the author performed a galvano-cauterization of the left turbinated. There was no special pain, and no bleeding followed. The next day the patient had severe headache. The third day suddenly arose bleeding from both nasal cavities. Treatment with ice-water. Some hours later renewed hæmorrhage; anterior tamponade of the nose, also of the posterior with Bellocq's tube on account of the continuance of the bleeding. In the evening the patient became feverish, Cheynes Stokes respiratory phenomena arose, the tampon was removed, but the temperature did not decrease and all symptoms of severe disease of the brain arose. Seven days later death occurred. No *post-mortem* examination. The author concludes the bleeding cannot be the direct consequence of the operation, because firstly it followed some days later than the operation, and secondly because parts which had not been operated on were bleeding. He believes that it was the consequence of a sinus thrombosis by which the circulation in the nose was disturbed. Also in some other published cases operations had been followed by meningial diseases after treatment of the middle turbinated.

Michael.

Discussion on the Papers of Hessler and Wagner: Complications in Brain and Ear following Nasal Operations. Verein der Aerzte in Halle-a-S., Meeting, Nov. 4, 1891. (See *ante*.)

SCHARFE believed that an antiseptic after-treatment should always follow the nasal operations. He also prefers galvano-caustic puncture to chiseling, believing that the latter gives more occasion to the entrance of sepsis. For tamponing he would apply iodoform gauze, and the tampon should not remain longer than twelve hours.

BRAMANN believed that a distinction must be made between essential epistaxis and bleedings following necrotic processes. For such processes a short tamponing will suffice; but for epistaxis the tampons must remain some days, otherwise the bleeding will recur. If performed in a proper manner, the tamponing is without any danger.

OBERST believed that the bleeding is caused by the solution of the eschar. When the bleeding began the temperature was already higher than normal, through the septic infection.

F. KRAUSE also believed that tamponing of the nose by an aseptic

medium, such as iodoform gauze, is not at all dangerous. He had only seen in one case erysipelas following its use, but this was cured. In the greatest surgical operations this manner of tamponing is also applied without any damage.

BRAMANN also believed that the tamponing was applied at a time when sepsis was already present.

Michael.

Clarke, J. Jackson (London).—*Dilatation of Sphenoidal Sinus*. "Brit. Med. Journ.," Dec. 12, 1891. Path. Soc. of London, Dec. 1, 1891.

THE specimen was taken from a boy, aged thirteen years. The sphenoidal bone contained a very large sinus; in this was a small myxomatous polyp. Two or three months before death he had had a fracture of the frontal bone, and latterly he experienced attacks of epistaxis, during one of which he died. The sphenoidal sinus was full of clotted blood, and communicated directly with an opening in the left carotid artery, which had probably been caused at the time of the accident. Dr. Spicer had been able to find one case only (Zuckerkanhl) of myxomatous polyp of the sphenoidal sinus.

Hunter Mackenzie.

Solly (London).—*Occlusion of the Posterior Nares by a Septum*. "Brit. Med. Journ.," Dec. 5, 1891. Clin. Soc. of London, Nov. 27, 1891.

EXHIBITION of a girl, aged sixteen, in whom this abnormality was apparently of congenital origin. It was perforated, and the opening kept patent.

Hunter Mackenzie.

MacBride, P. (Edinburgh).—*Case of Epithelioma confined to the Naso-Pharynx*. "Brit. Med. Journ.," Dec. 19, 1891.

A CLINICAL report of a case.

Hunter Mackenzie.

Wroblewski.—*Contribution to the Question of Post-Nasal Growths—Adenoid Vegetations in the Deaf and Dumb*. "Przegląd Lekarski," Nos. 23 and 24, 1891.

AFTER some remarks, regarding the pathology and treatment of post-nasal growths, the author presents the results of examination of the naso-pharynx in 160 cases of deaf and dumb. He found in 92 cases post-nasal growths in a smaller or greater degree, *i.e.*, 57, 5 per cent. That is a much greater percentage than with other children (Kafemann, 7, 8 per cent.). The author distinguishes (by posterior rhinoscopy) the following 5 forms: (1) growths filling up naso-pharynx under the form of an amorphous mass (10 cases); (2) hanging growths (23 cases); (3) nodulous (13 cases) on the basis of the cranium and on the lateral wall; (4) verrucous (6 cases); (5) mostly smooth growths (50 cases). With the deaf and dumb the last-named growths are frequent (23). Enlarged tonsils we meet oftener in the deaf and dumb (56, 5 per cent.) than in other children (Kafemann, 22, 4 per cent.). The author advises operation on these growths as soon as possible.

J. Sedziak.

Ball, J. B. (London).—*Remarks on Cases of Adenoid Vegetations*. "Practitioner," Jan., 1892.

AN analysis of 150 cases, presenting the ordinary features in the usual order of frequency. Only three were over twenty years of age. The

tonsils were enlarged in a large proportion of cases. In sixteen cases among other symptoms were noticed "nocturnal suffocative attacks," from the tongue dropping back against the palate. Restlessness at night was observed in twenty-five cases. Headache was common, aprosexia not observed. Dr. Ball is not in favour of posterior rhinoscopy as being difficult and, in children, not unfrequently impossible. He relies on palpation, and considers a gag unnecessary, as when "once the finger is back in the pharynx, the child strains and gags and does not bite" [*Credat Judæus Apella non ego*]. He discountenances expectant treatment, and operates under chloroform, with Woakes's forceps, followed by the use of the finger-nail. Nitrous oxide gas allows too short a time. [The abstractor would like to recommend a more trustful use of the posterior rhinoscopic mirror as quite practicable in a large number of cases, and certainly a humane substitute for palpation in diagnosis: also the use of one of the approved forms of finger-guard. He would also press for the use of the finger-nail *previous* to that of the forceps, as the operation conducted in this manner is more rapidly performed and quite practicable during nitrous oxide anæsthesia.]

Dundas Grant.

Marsh (Birmingham).—*Adenoid Hypertrophy in the Naso-Pharynx*. "Birmingham Med. Rev.," Nov. 1891.

THERE is nothing especially new in this paper; it treats of the symptoms and results of this common disease, and quotes some others who have written on it. The author treats it by finger-nail, Walsham's modification of Loewenberg's forceps, and the curette in children. In adults the galvano-cautery is preferable.

B. J. Baron.

MOUTH, TONGUE, PHARYNX, &c.

Schmolka.—*Syalolith in the Ductus Whartonianus*. "Prager Med. Woch.," 1891, No. 52.

THE stone removed by incision from a patient fifty years old had an ovoid form, was 32 mm. long, 16 mm. broad, and had a weight of 5½ gramm. Only one case is published of a syaloid stone larger than that of the author. It had a weight of 9·17 gramm.

Michael.

Siegel (Britz).—*Stomatitis Epidemica in Men, and its Identity with the "Maul und Klauensuche" of Domestic Animals, and the Microbes of both Diseases*. "Deutsche Med. Woch.," 1891, No. 79.

IN the little city of Britz, near Berlin, where the author had the greatest portion of the practice, he observed, in the year 1888-89, an up to now unknown epidemic disease in man. It must be remarked that in this city were kept many black cattle. The disease had the following symptoms: incubation eight to ten days: after this time began with shivering, universal indisposition, vertigo, epileptic spasms, vomiting, pains in the

stomach, constipation ; fever of 39 degrees, sometimes icterus. Some days later the characteristic inflammation of the mouth sets in ; the tongue is œdematous, covered with dark fur, the gums swollen ; the upper jaws are swollen, also the face. Now arise little vesicles on the tongue and the lips ; strong fœtor of the mouth. Sometimes the skin is covered with an exanthem of petechial character, especially on the arms. Some time later convalescence. In severe cases the attacks recur, or large ulcers arise in the mouth often combined with severe hæmorrhages and sanguineous suffusions of the skin. The liver is always swollen. In four fatal cases out of three hundred observed tetanus was noticed. The disease is very contagious. From careful bacteriological researches the author proved that the microbe of the disease is identical with that of the "foot and mouth disease" of animals.

Michael.

Jacob, E. A. (Leeds) — *Unusual Forms of Œdema*. "Brit. Med. Journ.," Dec. 19, 1891. Leeds, &c., Med. Chir. Soc., Dec. 4, 1891.

AFTER the reading of this paper, Dr. CHURTON mentioned the case of a man who was affected with transient œdema of the lower lip, traceable to the insanitary condition of his office.

Dr. GRIFFITH recorded a case in which the patient had been subject to transient and localized attacks of œdema from infancy, and on three occasions she had had great œdema of the larynx. Her father had died from sudden œdema (rimæ) glottidis.

Mr. JESSOP spoke of a lady who was suddenly seized with swelling of one side of the tongue, which subsided in twenty-four hours. She afterwards had an attack of transient œdema of the lip.

The PRESIDENT (Dr. Rabagliati) referred to the opinion entertained by some that many cases of asthma were due to a transient œdema of the mucous membrane of the bronchial tubes.

Hunter Mackenzie.

Dellevie, Hugo (Hamburg).—*Ueber die Bedeutung der Antisepsis im Munde* ("On the Value of Antisepsis in the Oral Cavity.") Inaugural Dissertation. Berlin : Schade, 1891. 74 pp.

TO illustrate the value of a careful antisepsis of the oral cavity as well for cleansing as for operations in that region, the author gives a review of the micro-organisms found up to now to exist in the mouth. Their number is already more than a hundred. He then describes a streptococcus not yet known which he had found and carefully examined bacteriologically. By experiments in animals he found that it is virulent and more resistant against most antiseptic medicaments than the other micro-organisms of the mouth.

Pneumonia cocci are often found in the saliva of healthy persons, and regularly in the saliva of pneumonic patients, also during convalescence, and in many cases a long time after the disease is cured. It must be concluded that the existence of these micro-organisms in the mouth is without hurt so long as the tissue of the lungs is at all intact. But if from any cause the resistance of the tissue of the lungs is diminished the cocci there will develop their deleterious functions. But they can spread also by the lymphoid channels, and are often found in abscesses round the circumference of the teeth, of the mouth, and sometimes also of the ear. The

same micro-organisms are found by some authors to exist in cases of meningitis cerebro-spinalis epidemica in the brain, in cases of endocarditis ulcerosa in the heart, and in cases of parotitis in the salivary glands. The streptococcus tetragenus often found in the saliva of healthy persons is also found in phthical cavities and in abscesses of the jaw. The ubiquitous micro-organisms, the staphylococcus pyogenes aureus, and the streptococcus pyogenes also are found in nearly every mouth, and from their presence the saliva derives its pyogenic effects. The author relates here the interesting fact that Caledonic criminals often use teeth detritus, which they insert under the skin to produce abscesses, by which means they escape work for a long time. But without such artificial means these micro-organisms may produce abscesses near the oral cavity. They may also produce universal septicæmia and metastatic pyæmic abscesses. The author then refers to many cases of osteo-myelitis mandibule and grave phlegmons of the neck published during the last few years; he also regards the relation of these micro-organisms to infectious phlegmon of the pharynx, the so-called cryptogenetic septicæmia. The saliva of syphilitic persons may spread this disease by kissing, by sucking the wounds of ritual circumcision, by touching the eyes and the wounds of tattooing with saliva. In the same manner tuberculosis may be propagated. He completes the register of the sins of the micro-organisms of the mouth by some remarks on diphtheria, actinomyosis, soor, and influenza. With all these facts before us, a careful cleansing and care of the mouth must be recommended, both prophylactically and therapeutically. The author's experiments prove that the best medications for this purpose are: solution of sublimate 1:1500, β . naphthol 1:1000, thymol 1:1000, salicylic acid 1:350, saccharin 1:200, benzoic acid 1:100. Dentists must apply careful disinfection to all their instruments. A review of the literature of the subject, including 180 publications, concludes this instructive treatise.

Michael.

Lloyd, Jordan (Birmingham).—*Recurrent Papilloma of the Tongue.* "Brit. Med. Journ.," Dec. 26, 1891. Birmingham, &c., Branch Brit. Med. Assoc., Dec. 10, 1891.

EXHIBITION of the anterior two-thirds of the tongue of a man, aged forty-two, which had been removed for this complaint. The patient had had syphilis when young. The papilloma had developed on one of the several patches of thickening on the surface of tongue.

Hunter Mackenzie.

Hutchinson, Jonathan (London).—*An Address on the Surgery of the Tongue.* "Brit. Med. Journ.," Dec. 12, 1891.

IN this address, which was read before the Liverpool Medical Institution, the author recommends the ordinary screw *écraseur* as the best instrument for this purpose. He gives detailed instruction as to the method of using it.

Hunter Mackenzie.

Steele, Charles (Clifton).—*Scirrhus of Tonsil.*—"Lancet," Jan. 9, 1892, p. 84. A HEALTHY-LOOKING gentleman, aged fifty-three, complained of fulness and discomfort in the left tonsil. His father had died of cancer. "The

" tonsil was enlarged, having a smooth flat surface as large as a penny " curling over its anterior edge, very firm to the touch. There was also a " visible fulness under the left ear." The trouble began in January, 1891. A diagnosis of cancer was made. Anti-specific medication had no effect. The swelling under the ear increased, swallowing became more difficult, the tonsil did not enlarge much more, but the curled edge became more prominent. External ulceration took place, and the patient died in nine months from the commencement. Some relief was afforded by tincture of hydrastis in one minim doses three time a day.

Dundas Grant.

Bosworth (New York).—*Lymphatism*. " Med. News," Oct. 3, 1891.

MANIFESTATIONS of lymphatism are enlarged faucial and lingual tonsils, and adenoid disease in the vault of the pharynx. All such enlargements ought to be looked on as evidence of a constitutional taint. In the earlier years of life they are amenable to internal treatment, especially with iodide of iron. The dose of this drug must be large to do any good ; e.g., for a child five years old, two and a half grains three times a day, gradually increased to five grains. Even where in older cases we have to treat the masses surgically, we must still adopt the internal treatment. Dr. Jacobi believes lymphatism to be due to local irritation of the head, ear, or mouth, rather than a disease *per se*. Eczema, common nasal or post-nasal catarrh, if untreated, will give rise to a chronic adenitis, involving the glands of the neck and extending to the mediastinal and axillary glands.

B. J. Baron.

Sokolowski.—*Contribution to the Pathological Inflammatory Affections of the Tonsils*. " Przegląd Lekarski," No. 31, 1891.

IN the above excellent paper, which has been written together with his assistant, Dr. Dmochowski, the author especially occupied himself with the examination of the processes situated in the crypts of the tonsils, and characterized, amongst others, by their increased secretion. We mostly meet in the crypts with plugs composed of compact, horny epithelial cells, with a small addition of lymphoid cells. It is known that, for the most part, they are situated in the crypts of enlarged tonsils. The author, on examining tonsils hardened in alcohol, convinced himself that the walls of the crypts are strewn with small grains, sometimes as if with small papillae, which under the microscope presented themselves as greatly hypertrophied folliculi, growing into the lumen of the crypts—thence the stenosis of the orifice of the crypts and accumulation of the secretion, which, remaining a longer time as a " corpus alienum," decomposes and irritates the neighbouring tissues, resulting in catarrhs, mostly characterized by proliferation and great desquamation of the epithelium. The clinic, however, teaches that with such desquamative catarrhs we also meet—though rarely in the tonsils—with little or no hypertrophy. Thence the author inclines to giving them a separate place in the classification of diseases of the tonsils, under the name of " tonsillitis lacunaris desquamativa chronica." It is known that this disorder is *par excellence* chronic. There are sometimes exacerbations ; then the plugs, which under general conditions are easily removed from the crypts, are embedded solidly. The

microscopic examination of the tonsils, extirpated in this period, convinced the author that, from the anatomical point of view, these two processes do not differ at all. As causes of these exacerbations the author regards either the occlusion of the plugs, on account of increased hypertrophy of the folliculi, or the exacerbation is caused by some other agent, may be of a rheumatic nature, and occlusion of the plugs is only the secondary result, on account of hyperæmia and swelling of the walls of the crypts. Although there is no anatomic difference between the chronic cryptic process and its exacerbation, yet, clinically, this latter presents such various pictures that we must necessarily distinguish it. For this process the author proposes the name of "tonsillitis lacunaris desquamativa exacerbata" (not "acuta," as he did not find desquamation of the whole epithelial layer with the secondary erosions—characteristic of this form). Further, the author occupied himself with the question of the so-called "angina follicularis." As is known B. Fraenkel, in the year 1886, drew attention to the connection existing between the above disease and diphtheria, not identifying, however, both these disorders. The author did not content himself, as Fraenkel did, with the examination of the secretion of the crypts, but extirpated the whole tonsil, and, after having soaked it in paraffin, made careful examinations. There was not the least doubt that in these cases (three) the author had to do with the typical "angina lacunaris." The author supposes that the fear of bleeding after the extirpation of the tonsils by this process is somewhat exaggerated. In the sections coloured by Weigert's method, the author found considerably widened crypts filled with the secretion, distinguished from the masses with which the author met in the "tonsillitis desquamativa." There was, especially, a great number of lymphatic cells, micro-organisms, and the presence of a fibrinous network. As to the bacteria, the author mostly found small diplococci. The relation of the fibrin to tissues differed a little, as in diphtheria, where the fibrinous net deeply pierces into the tissue, which ensues in necrosis. There, however, the process is of a very mild character, so that if necrotic places happen to be present, it is only in superficial layers of the tissue. As regards adenoid tissue and folliculi, with exception of a very considerable infiltration, no other changes could be observed. The author concludes that we have to do here with the so-called "infiltratis pseudo-membranacea." In one word, he identifies "angina lacunaris" with diphtheria, from which it differs only by its milder degree, and proposes for it the name of "tonsillitis lacunaris pseudo-membranacea."

J. Sedziak.

Rozenzweig, R. H. (Cape of Good Hope).—*False Teeth Swallowed.* "Brit. Med. Journ.," Dec. 5, 1891.

SHORT note of a case in which a plate with teeth had been passed *per anum* seven weeks after having been swallowed. *Hunter Mackenzie.*

Moritz (Manchester).—*Thoracic Aneurism rupturing into the Oesophagus.* "Brit. Med. Journ.," Dec. 5, 1891. Manchester Path. Soc., Nov. 11, 1891.

NARRATION of history, and demonstration of preparation.

Hunter Mackenzie,

LARYNX, &c.

Robertson, W. (Newcastle-on-Tyne).—*Pachydermia Laryngis Diffusa*. "Brit. Med. Journ.," Dec. 12, 1891. Newcastle-on-Tyne Clin. Soc., Nov. 26, 1891.

A CASE was shown in which there was thickening of the rima glottidis corresponding to that part of the mucous membrane covered by squamous epithelium.
Hunter Mackenzie.

Bandler (Prag).—*Relation of Chorditis Inferior Hypertrophica to Rhinoscleroma*. "Zeitschrift für Heilkunde," 1891, p. 227.

IN the specimen of a typical case of chorditis inferior dead from lobular pneumonia the author has found rhinoscleroma bacilli, and concludes that both are the same process.
Michael.

Zuffinger (Wien).—*Circumscribed Keratosis in the Larynx*. "Wiener Med. Woch.," 1891, No. 47.

A PATIENT, sixteen years old, had been hoarse for a long time. The laryngoscope showed white tumours situated on both vocal bands near the anterior commissure. On the tumours were three little spines, looking like little fish bones, or husks of corn, and it was thought probable, therefore, that there was a foreign body. Extirpation of the spines and the tumours by a sharp forceps. The microscopical examination communicated *in extenso* in the original showed that there was a process analogous to the so-called "cornu cutaneum," and therefore the author called it "keratosis."
Michael.

Daubney.—*Inherited Syphilis of the Larynx*. "Med. News," Oct. 10, 1891.

THE author relates a case of a girl, sixteen years of age, with ulceration of the uvula, epiglottis, and the ventricular bands. The vocal cords were hidden. The diagnosis lay between syphilis and tuberculosis. Full doses of iodide of potassium and perchloride of mercury, along with detergent sprays and nitrate of silver locally, soon improved matters.

Another case of a girl, seventeen years old, presented the appearances of perforation of the anterior pillar, ulceration of the pharynx and of the right ventricular band. Appropriate anti-syphilitic treatment cured.

B. J. Baron.

Lenzmann (Duisburg).—*Experiments on the Treatment of Pulmonary and Laryngeal Phthisis by Tuberculinum*. "Deutsche Med. Woch.," 1891, Nos. 50, 51, and 52.

IN forty patients with tuberculosis of the lungs were some patients with laryngeal phthisis; one of them has been cured. He has also treated one case of lupus of the larynx. The epiglottis was converted into an irregularly formed tumour, covering the entrance of the larynx. By the injections, the intumescence decreased so that the larynx could now be seen; but the last portions of the tumour did not disappear.
Michael.

Heryng (Warschau).—*Contribution to the Effect of the Cantharidinic Salts.* "Therap. Monats.," 1891, No. 11.

THE author has applied the treatment in twenty cases of laryngeal phthisis, in sixteen of them without any advantage, in four cases with good effect.

1. A patient, nineteen years old, with tuberculosis of the lungs, infiltration of the posterior laryngeal wall, and ulceration of the right vocal band. After five injections of 0'0002, cicatrization of the ulcer of the vocal band and improvement of the posterior wall.

2. A patient, nineteen years old, with progressed tuberculosis of the lungs and infiltration of the posterior laryngeal wall. After six injections improvement. Some time later recurrence.

3. A patient, thirty-five years old, with tuberculosis of the lungs, ulceration of the posterior laryngeal wall and of the left vocal band. Curettage, improvement. Some time later recurrence. After some injections the laryngeal ulcers were cured.

4. A patient, twenty-six years old, with progressed tuberculosis of the lungs, and ulceration of nearly the whole larynx. After the first injection some improvement; some time later recurrence, hectic and death.

Michael.

Lodge, S. (Bradford).—*Bilateral Palsy of Laryngeal Abductors.* "Brit. Med. Journ.," Dec. 26, 1891. Bradford Med. Chir. Soc., Dec. 15, 1891.

EXHIBITION of patient, improving under treatment with iodides.

Hunter Mackenzie.

Heryng (Warschau). — *Further Contributions: The Possibility of Complete Re-Absorption of Tuberculous Infiltrations.* "Berliner Klin. Woch.," 1891, No. 47.

REPORT on the specimen of laryngeal tuberculosis cured by enucleation and microscopically examined by Dr. E. Fraenkel in Hamburg, who reported that this was a case of absolute cure.

Michael.

Editor, "British Medical Journal" (London). — *Roaring in Horses: its Hereditariness and its Import.* "Brit. Med. Journ.," Dec. 12, 1891.

A LEADING article in the journal. The writer mentions the conditions of the larynx associated with this disorder, and says that practical proof of its hereditary nature is very abundant. For its eradication it is proposed that breeding from animals affected by the disease should be prohibited by law, as is now the case in France.

Hunter Mackenzie.

Mules, P. (Manchester). — *Thyrotomy for Papillomata of the Larynx.* "Brit. Med. Journ.," Dec. 19, 1891. Manchester Med. Soc., Dec. 2, 1891.

NARRATION of the case of a child, aged four years. *Hunter Mackenzie.*

Clarke, Ernest. — *Tracheotomy for Impaction of Foreign Body in the Bronchus.* "Brit. Med. Journ.," Dec. 26, 1891. West Kent Med. Chir. Soc., Dec. 4, 1891.

EXHIBITION of a child, aged one year, on whom tracheotomy had been performed for impaction of a piece of pear, the size of a large pea, in the

left bronchus. Twelve hours subsequently the foreign body was coughed up through the tube. Recovery.
Hunter Mackenzie.

Lubliner (Warschau).—*The Technique of Mechanical Treatment of Laryngeal Stenoses.* "Therap. Monats.," 1891, No. 11.

DESCRIPTION of Heryng's modification of Schrötter's method, consisting in the introduction of the tin bougie by direction of a tin bougie, and fixation in a canula with a hole, by which method the application of the "fixir pincette" is rendered superfluous.
Mickael.

Root (Albany).—*A Case of Total Extirpation of the Larynx; recovery with a useful voice.* "New York Med. Journ.," Oct. 17, 1891.

THIS is the case of a man aged forty-one years, the operation being performed by Dr. Greville Macdonald for cancer of the larynx. Gradually increasing hoarseness induced him to seek advice, and this was caused by a large irregular mass filling the anterior half of the glottis and concealing the anterior three-fourths of the vocal cords. There was a small ulcer on the posterior surface of the growth, and the latter was found to be extensively attached to the under surface of the left cord, the corresponding ventricular band not being implicated. The impairment of movement of the cords seemed to be purely mechanical.

He was first seen in April, but not until the end of October was the operation of partial excision of the larynx performed, owing to the non-consent of the patient and of other consultants who saw him. The growth was really larger than was suspected. The inferior cornu was cut off, the crico-thyroid muscle divided, the arytenoid enucleated, the alæ drawn forward, and the whole mass, including two-thirds of the right cord, was removed. Hahn's tube did good service, and the wound was dressed with corrosive sublimate and iodoform gauze. The growth was an epithelioma. An ordinary Durham's tube, covered with gauze so as to plug the trachea, replaced Hahn's tube the day after the operation. Three weeks after the operation the patient left the hospital with a good but hoarse voice.

About a fortnight later he was again admitted with difficulty of breathing necessitating tracheotomy, and recurrence was found to have occurred. The whole larynx was removed seven weeks after the first operation and he recovered. The voice has returned and is loud and hoarse, but not monotonous. The sound is produced by the vibration of the mucous membrane of the pharynx. An artificial larynx was found to be too cumbersome, and the sound produced by it was annoying to the patient. A tube like that of the artificial larynx was then attached to a Durham's canula. Immediately behind the shield there was a circular opening upon the surface; through this there passed a short curved tube upward and thence slightly backward, projecting about three-fourths of an inch. In the posterior wall of the projecting tube was an orifice to admit air into the pharynx or at the tracheal opening. The upper orifice was less than one-eighth of an inch in diameter. Voice was immediately produced by this, but soon became loud and vibrating, due to the falling over of the bilateral fold of the mucous membrane. A closed tube

replaces the small open one when food is taken. He speaks better without the upper tube, but this is necessary to keep the canula open.

B. J. Baron.

Turner, F. C. (London).—*Sarcoma at Root of Right Lung, invading Right Bronchus and Superior Vena Cava.* "Brit. Med. Journ.," Dec. 12, 1891. Path. Soc. of London, Dec. 1, 1891.

CARD specimen.

Hunter Mackenzie.

Fraenkel, A.—*Diagnosis of Thoracic Tumours.* Berliner Medicinische Gesellschaft, Meetings, Nov. 4, 11, and 25, 1891.

Of this comprehensive paper only those parts relating to laryngeal and tracheal complications will be referred to here. Dyspnoea and stridor alone cannot prove the existence of an intra-thoracic tumour, but they are often combined with symptoms of involvement of the laryngeal nerves. If then both recurrents are paralysed we may believe a tumour to exist, because in cases of aneurism double paralysis is only exceptionally observed. The author then relates a case of a patient in whom a tumour was diagnosed, in spite of its being rather little. The patient, fifteen years old, was hoarse, and had inspiratory and expiratory stridor. The left radial pulse was not so strong as the right. On the right side of the neck there was distention of the venous plexus. No dulness over the thorax. The left vocal cord was in the cadaveric position, also the right could not be moved *ad maximum*. The author diagnosed an intra-thoracic tumour. Some months later a dulness over the higher parts of the sternum was detected, with œdema of the anterior thoracic wall and the face. Some days later death occurred. The specimen shows a tumour in the region of the bifurcation, causing a compression of the right bronchus. The vena cava is thrombosed, also the left vena anonyma and jugularis; œdema laryngis; total destruction of the left and partial of the right recurrent nerve. The microscopic examination gave no certain result, but it seemed to be a syphilitic neoplasm.

B. FRAENKEL remarked that often in cases of paralysis of the recurrent nerve there is no hoarseness because the vocal band stands often in the median line. Paralysis of the right recurrent nerve, and of both recurrents, is rather rare in aneurisms. An important symptom is pulsation of the trachea, felt by the finger introduced as deeply as possible in the jugulum. The aneurisms sometimes dislocate the trachea, but the compression of the trachea, the so-called scabbard-shaped trachea, is always caused by a tumour.

FURBRINGER recommended probe puncture as not dangerous, and often declaring the nature of the case. Tumours are often as painful as aneurisms, so that this symptom (pain) is without value.

EWALD remarked that the injection of the skin veins occurs more often in cases of tumours. The stridor is usually stronger when the patient lies; in one case the patient derived more relief from lying, and the *post-mortem* examination showed that the tumour compressed the trachea more in the erect position.

VIRCHOW showed a specimen of *Cancer of the Bronchi*. Concerning the case of A. Fraenkel he confirmed the diagnosis of syphilis.

GUTTMAN related a case of *Primary Intra-Thoracic Cancer* diagnosed by the paralysis of the left recurrent nerve.

TROVE showed a specimen of an *Aneurisma Arcus Aorte, of the size of a child's head*. The patient, sixty years old, was hoarse and feeble, had dulness round the sternum, pulsation of the whole thorax, recurrent paralysis of the left side. Death by increasing debility. A differential diagnosis between tumour and aneurism could not be made *intra vitam*.

Michael.

NECK, &c.

Spanton, W. D. (Stafford).—*Goitre*. "Brit. Med. Journ.," Dec. 19, 1891.
Staffordshire Branch Brit. Med. Assoc., Nov. 26, 1891.

EXHIBITION of a woman, aged thirty-six, in whom the right lobe and isthmus of a fibrous goitre had been removed, and a girl, aged fifteen, in whom the isthmus had been divided. Both patients had done well, and had been freed from the dyspnœa from which they formerly suffered.

Hunter Mackenzie.

Helferich.—*Cases of Struma*. Greifswalder Medicinischer Verein, Meeting, August 1, 1891.

THE author showed three cases of struma operated upon lately. 1. A patient, twenty-six years old, struma of the left side; operated upon by intra-capsular operation: cure. 2. A patient, fifty-two years old, with a large double-sided struma, dyspnœa and hoarseness; the laryngoscope showed a paralysis of the recurrent nerve of the left side; total extirpation of the right struma, and resection of the left-sided struma. During the operation a substernal goitre was also found, which was extirpated; the trachea was compressed: cure. 3. A patient, thirty-eight years old, had a large struma, and was hoarse; paralysis of the left recurrent nerve, intra-glandular enucleation: cure.

Michael.

MacLaren (Carlisle).—*Large Cyst of Thyroid Removed by Operation*. "Brit. Med. Journ.," Dec. 12, 1891. Border Counties Branch Brit. Med. Assoc., Nov. 12, 1891.

THE subject was a farm labourer, aged sixty-two, in whom the cyst had existed for nearly twenty years. It was removed by an oblique incision and enucleation. It was largely calcareous, and weighed with contents nearly two pounds. A month afterwards the patient was nearly well.

Hunter Mackenzie.

Targett, J. H. (London).—*Sub-sternal Goitre*. "Brit. Med. Journ.," Dec. 19, 1891. Path. Soc. of London, Dec. 15, 1891.

CARD specimen.

Hunter Mackenzie.

Loewy (Berlin).—*Case of Myxedema in a Cretinized Dwarf*. "Berliner Klin. Woch.," 1891, No. 47.

SEE the report on the meeting of the Berliner Medicinische Gesellschaft, July 1, 1891.

Michael.

Wolfler. — *Lipoma of the Neck.* Verein der Aerzte Steirmarks. Meeting, Oct. 26, 1891.

THE author showed a girl, fifteen years old, having a lipoma of the neck of colossal extent, covering half of the breast. The tumour will be extirpated.

Michael.

Paltauf (Wien). — *Rare Tumours of the Neck.* "Internat. Klin. Rundschau," 1891, No. 48.

THERE are some tumours which owe their situation on the neck to their branchiogenic origin, and are in relation with fistula colli congenita. Such tumours are hydrocele colli and cystis colli congenita. Branchiogenic cancers sometimes arise. Such cases must be carefully differentiated from secondary cancers, because sometimes the surgeon may believe he is extirpating a primary tumour, whilst it is really secondary to a small laryngeal cancer.

Michael.

E A R, & c.

Hills, T. Hyde (Cambridge). — *Cases of Deafness Treated by Injection of Pilocarpin.* "Lancet," Jan. 9, 1892.

TWO cases of what appear from the somewhat incomplete description to be dry chronic middle-ear catarrh improved considerably during a seven weeks' treatment by hypodermic injections of pilocarpin, but in three weeks they were again as deaf as ever. He had observed the same result in a case treated by Mr. Field. He speculates cautiously as to the possible action of pilocarpin on the labyrinth, but with more confidence as to its effect on the middle-ear. [The unsatisfactory effects of pilocarpin administered by hypodermic injection in cases of dry chronic middle-ear catarrh were most vigorously emphasized by Politzer in the "Lancet" for Jan. 3, 1891, and ought to be well known to all otologists. The use of pilocarpin, syringed or sprayed through the Eustachian catheter, is often beneficial and less injurious to the individual. We do not here refer to labyrinthine disease.]

Dundas Grant.

Lake, R. (Barnes). — *Soft Papilloma of Ear of Suspected Infectious Origin.* "Lancet," Jan. 9, 1892.

A GIRL of seventeen, who had suffered from otitis media purulenta for two or three years, had had severe pain in the ear for some weeks, with a horribly fetid discharge. The meatus was found to be occluded by three soft, pink, papillomatous masses, one growing from the tragus, one from the inner surface of the antitragus, and one from the adjacent part of the concha, and extending into the meatus. They resembled gonorrhœal warts, but there was no history corroborative of that origin. After complete erosion and cauterization with chloride of zinc, a cure resulted. The other growths were secondary to the one in the concha.

Dundas Grant.

Milligan (Manchester).—*The Treatment of "Attic" Suppuration by Excision of the Auditory Ossicles.* "Brit. Med. Journ.," Dec. 12, 1891. Manchester Med. Soc., Nov. 4, 1891.

IN an analysis of 375 cases of ear disease, suppurative inflammation in the tympanic "attic" was found twelve times. The indications for the excision of the auditory ossicles were (1) chronic purulent disease of the tympanic attic, and (2) caries of the ossicles. Four cases were narrated in which the malleus and the remaining portions of the membrana tympani were excised.

Hunter Mackenzie.

Tubby, A. H. (London).—*Treatment of Outstanding Ears.* "Brit. Med. Journ.," Dec. 5, 1891.

THE author operates thus:—"An elliptical piece of skin, with its long axis vertical, is removed partly from the skin behind the auricle, and partly from its posterior surface, the breadth of the removed portion not exceeding one to one and a half inches, according to the size of the ear and the extent of the deformity. Then completely divide the cartilage of the concha at its most prominent part, taking care not to buttonhole the skin. Two or three deep sutures are then passed through the skin beneath the surface of the wound. When these are tightened the auricle lies closely to the side of the head, without the continued disfigurement of a doubled-over auricle." The author highly recommends this method.

Hunter Mackenzie.

ASSOCIATION MEETINGS.

MEETING of the OTOLOGICAL SECTION of the Sixty-fourth Gathering of the ASSOCIATION of GERMAN NATURALISTS and PHYSICIANS.
("Monats. für Ohrenheilk.," Nov., 1891).

(Continued).

Dr. STACHE.—*Further communications on the Operative Exposure of the Cavities of the Middle-Ear after Separation of the Auricle.*

Stache referred to his new method of operation for opening the accessory cavities of the tympanum, as brought before the International Congress at Berlin, and communicated his experience of it up to the present time, elucidating the process by means of preparations, drawings, and the exhibition of patients.

The operation is indicated in cases of incurable chronic middle-ear suppuration, especially when it affects the "attic" of the tympanum, and more particularly in cases of manifest caries and cholesteotoma in that cavity. As a rule the antrum is simultaneously affected even in the absence of symptoms (of antrum disease). In thirty out of thirty-three cases pus issued from the mastoid during the operation.

By separation of the auricle and vertical division and drawing forwards

of the (cartilaginous) meatus the field of operation is even in its deepest parts laid so thoroughly open that it can be explored by direct daylight. The malleus and incus with the tympanic membrane—or what remains of it—are removed, the outer and lower wall of the “attic” is chiselled away, and the antrum, if found affected, is opened similarly, not only from without but also by removal of the whole of the posterior wall of the external meatus, so that one cavity is formed by the meatus and antrum right into the tympanum. This cavity is then covered by a flap of skin and periosteum from the meatus. The object of this transplantation is (1) to start the growing of healthy epidermis in the middle-ear wherewith to cover the exposed osseous cavity; (2) to construct a lasting skin-covered opening between the antrum and the meatus. The method, as it follows the outflow of pus from the tympanum, affords a sure and safe means of completely laying open the diseased cavities on a probe and of completely cleansing away the whole of the diseased tissues during one administration of anæsthetics.

The after-treatment has been simplified, but requires the greatest care in order that the cavities may not get filled up with granulations, which lead to the formation of bridges and niches retaining pus instead of a smooth epidermic covering. The average duration of treatment is about four months, which is less than that after simple opening of the mastoid. His results were as follows:—Out of thirty-three cases nineteen healed up, two were discharged for other treatment, two disappeared, nine remained still under treatment, and one died of diabetes mellitus independently of the operation. The hearing-power was occasionally improved, never made worse, and generally unaltered.

The advantages were the combination of safety with certainty and rapidity of cure, as compared with what is offered by the earlier operations.

Dr. LÖWE believed that he had got equally good results by the use of modified dental drilling machines with a peculiarly curved handle under illumination by the reflector. He thus made an opening through the epitympanic bone, selecting as his site the line of prolongation of the manubrium mallei forwards and upwards.

Prof. SCHWARTZ considered Löwe's operation as one to be discarded, and Stacke's much to be preferred, as Löwe acknowledged that facial paralysis had occurred in his operation, whereas in Stacke's it was quite prevented.

Dr. KRETSCHMANN dwelt upon the necessity for careful hæmostasis and good illumination during the operation. In case of defective daylight, he advocated a small electric light that could be held close to the part. His operation for simultaneous opening of the antrum differs somewhat from Stacke's. His incisions in skin and soft parts are the same. He cuts off the meatus, makes an incision in the posterior wall parallel to the long axis of the meatus as far as the membrane, and from there along the margin of the latter, upwards and downwards, to the upper and lower walls of the meatus. Next comes opening of the antrum, and removal of the partition between it and the meatus, and of the osseous portion of the outer tympanic wall. The upper of the two flaps (in the osseous meatus) is stitched to the antero-superior margin of the wound in the soft parts,

and the lower flap to the antero-inferior margin. A flap is then made from the posterior margin of the wound, and is laid on the posterior wall of the funnel-shaped osseous cavity which has been formed. The skin wounds are then stitched. The dressing need only be changed every four or five days. The opening admits of the observation of the tegmen tympani, the antrum, and the wall of the labyrinth.

Prof. SCHWARTZE stated that he had operated after Stacke's method for nine months, and that out of twenty cases in only one had facial paralysis come on. Four of the cases had completely recovered. The time required for healing was shorter than with the ordinary leaden nail operation, but the difficulty of the proceeding was greater, and required much skilled assistance, good illumination, and practice on the cadaver.

Prof. WALL suggested the employment of Reverdin's method of transplantation of skin.

Dr. REINHARD. *Contribution to the Excision of the Malleus and Incus.*

Dr. Reinhard referred to the frequency of "attic" suppuration and to its symptoms, especially the characteristic appearances of the tympanic membrane :—(1) Total absence of the membrane up to the handle of the malleus, which appeared like a rusty tack free in the lumen of the tympanum. (2) Perforations in the membrane of Shrapnell, close to, behind, or above the short process of the malleus. (3) Granulations growing out of these, which, with their rapid re-growth, are almost pathognomonic of caries of the malleus and attic suppuration. He then dwelt on the peculiar seriousness attaching to suppuration in the attic, on account of the unfavourable conditions for the escape of pus and the immediate proximity of the brain, which is only separated from the focus of suppuration by a thin, and often dehiscent, plate of bone. In these cases, often quite intractable under other treatment, he advises removal of the malleus and incus according to Schwartz's method.

Out of thirty cases he had had sixteen cures (lasting, so far, at least half a year). In those cases which had not yet healed, he attributed the non-success to extension of the disease to the neighbouring cavities of the mastoid process or to the antrum, small cholesteatomatous foci in these parts being often the obstacles to healing.

After the operation the part is irrigated with a 2 to 3 per cent. carbolic lotion, and after eight or ten days, if no cicatrization has taken place, carbolic syringing is practised daily by means of Schwartz's antrum canula. Healing set in, in the sixteen cases, in from ten days to two and a half months.

He prefers Schwartz's method to Stacke's, as being less severe, safer, and simpler, giving less frequent occasion to vertigo, facial paralysis, or severe hæmorrhage. In his thirty cases none of these troubles arose. The hearing-power was improved in 50 per cent., and in 50 per cent. remained as before. The operation is not, however, intended to improve the hearing, but to preserve health and life.

Dr. STACKE did not go the length of saying that the previous removal of the ossicles was a plan to be abandoned, but he thought private

patients would refuse to have a second operation, and by his plan the whole was done at one time. He considered the removal of the incus through the meatus was not altogether free from danger, and in case of the manubrium being broken off, the head of the malleus would have to be removed from behind.

Prof. SCHWARTZE said that all proper care should be taken to obviate the dangers attaching to these operations, and although attacks of vertigo and facial paralysis had been known to result, no case of death from them had been reported.

Dundas Grant.

(To be continued.)

PROCEEDINGS OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

(Report in "Medical News," October 10, 1891.)

Dr. GLASGOW (St. Louis) read a paper on *A Case of Foreign Body in the Trachea*. The foreign body was a toy balloon with a whistle attached, which was removed through the windpipe.

Dr. CLINTON WAGNER (New York) related particulars of *A Case of Thyrotomy in a Child eighteen months old*. The reason for the operation was a small papilloma near the posterior end of the left cord. The case recovered, and out of ten thyrotomies performed by Dr. Wagner, six died and four recovered.

Dr. MULHALL (St. Louis) advocated the finger-nail to remove small superficial papillomata of the vocal cords.

Dr. HARRISON ALLEN read a paper on *The Tonsil in Health and Disease*. He holds the operation of amputation of the tonsils as unscientific and unnecessary. In many cases he alleges that the tonsillar enlargement subsides if the adenoid tissue in the naso-pharynx is reduced to a healthy condition. He advocates cutting across any adhesions that stretch across the surface of the tonsil and obstruct the openings of the crypts of the gland. Astringent applications are subsequently made by means of a probe pushed into the crypt.

Dr. WRIGHT (Brooklyn) believed that the tonsils cause irritation and dam up the secretions, and thus lead to pharyngeal disease.

Dr. ROE (Rochester) advocated the evacuation of the abscess by closed scissors, to be opened when in the tonsil.

Dr. RICE (New York) read a paper entitled *The Troublesome Symptoms caused by Enlargement of the Epiglottis, and the advisability of reducing the size of this Cartilage by Operative Measures*. When the epiglottis is the seat of a chronic morbid process and is of abnormal size, due to injuries or the excessive use of tobacco or alcohol, or if congenital enlargement be present, it may be lessened by operative measures. Long-bladed scissors or cutting forceps were used to effect this under cocaine. He does not like Mackenzie's epiglottitome or the galvano-cautery.

Dr. WAGNER has removed the whole epiglottis for carcinoma, with no ill effects.

In the discussion on *The Result of Treatment of the Upper Air Passages in producing Permanent Relief in Asthma*, Dr. BOSWORTH distinguished three factors in every attack :—

1. The peculiar neurosis.
2. Some external, perhaps atmospheric excitant.
3. Frequently some local condition in the nose that entails unusual susceptibility to certain irritants. In a large proportion of cases a restoration of the normal respiratory function, by removing obstruction in the nose, etc., confers immunity.

Drs. MULHALL and ASCH showed new instruments.

Dr. WRIGHT (Brooklyn) spoke on *Nasal Papillomata*. They occur, as a rule, upon the septum, in conformity with the observation that the muco-cutaneous junctions are the favourite sites for epithelial proliferations.

Dr. JARVIS cauterizes the base of the growth with chromic acid after removal.

Dr. SHURLY (Detroit) read a paper entitled *A Study of a Case of Nasal Tuberculosis*. The subject was a monkey with profuse nasal discharge containing bacilli, and it is very interesting to note that it remained strictly a local disease, as was discovered *post-mortem*.

Dr. KNIGHT (New York) read a paper on *Cysts of the Middle Turbinated Bone*. These are due, the author thinks, to (1) rarefying osteitis; (2) hypertrophic rhinitis—the latter more commonly than the former. None of the cases are under twenty years of age, and the cyst is caused by outgrowth from the middle turbinated bone, which curls on itself and forms a closed cavity, lined with ciliated epithelium and containing mucus or muco-pus. Operative treatment is simple—the cyst must be extirpated and treated antiseptically.

Dr. BOSWORTH (New York) read a paper on *The Various Forms of Ethmoid Disease*, and distinguishes five varieties :—

1. Extra-cellular myxomatous degeneration, without purulent discharge.
2. Extra-cellular myxomatous degeneration with purulent discharge.
3. Purulent ethmoiditis with nasal polypi.
4. Intra-cellular myxomatous degeneration without pus.
5. Intra-cellular myxomatous degeneration with pus.

The second variety is a late stage of the first, and the fifth a late stage of the fourth. The cause of the third variety is nasal polypi, that of the others is not to be determined.

Diagnosis is based on carefully tracing the source of pus discharge. The diffuse myxomatous degeneration so frequently seen covering the middle turbinated bone should, in the majority (if not in all) cases, be accepted as evidence of a diseased condition of the mucous membrane lining the ethmoid cells. The treatment of all forms consists in uncovering the ethmoid cells by removing the curved cap of the middle turbinated body by means of the snare, and subsequently breaking up and destroying, as far as possible, the trabeculæ by means of the electric burr or the curette.

Dr. CASSELBERRY (Chicago) read a paper on *The Radical Treatment of Nasal Myxomata*. They are said to grow from free borders or edges usually, especially on the free edge of the middle turbinated bone. Part of the bone ought to be removed with the polypus by means of curved scissors or punch forceps. The site of the growth can be touched with the cautery.

Dr. SOLIS-COHEN (Philadelphia) considered *The Symptoms and Pathological Changes in the Upper Air Passages in Influenza*. The prominent changes are lymphoid infiltration of the soft parts, causing more or less œdematous swelling of the soft tissues. A curious case was mentioned, viz., that of an old gentleman suffering from epithelioma of the palate; the patch of malignant disease sloughed during an attack of influenza, and perfect recovery ensued. [The epidemic of influenza, at present attacking people in Bristol and district, is giving rise to an unusual amount of sore throat with inflammatory redness and swelling, and a similar state of things in the larynx, causing very rapid loss of voice and in some cases dyspnœa.—*Rep.*]

Dr. ASCH (New York) reported *A Case of Epithelioma of the Larynx*. The symptoms began with hoarseness and pain, and in a few months cough and dyspnœa, the characteristic appearances of carcinoma showing themselves.

A few drops of a two per cent. solution of cocaine were injected in the line of the incision, and tracheotomy painlessly performed without a general anæsthetic. Extirpation of the larynx was afterwards performed. The patient subsequently died of an attack of dyspnœa.

Dr. MACKENZIE (Baltimore) presented a communication entitled *The Laryngo-Tracheal Neoplasms of Tuberculosis*. He recognizes the following varieties:—

1. Papillary hyperplasia.
2. Papillary warty growths having nothing to distinguish them clinically from ordinary papillomata. These may be removed, but should not be operated on unless they mechanically hinder breathing.

A solitary form of tubercular tumour first described by the author.

B. J. Baron.

LARYNGOLOGISCHE GESELLSCHAFT IN BERLIN MEETINGS.

Oct. 20—Nov. 26, 1891.

KATZENSTEIN.—*Median Position of the Vocal Bands.*

Polemical article directed against the views of Wagner (Halle).

P. HEYMANN.—*Laryngeal Œdema following the Use of Potassium Iodide.*

A patient, twenty-seven years old, treated for syphilis with iodide, got some days after the omission of the medicament a laryngeal œdema with stridor. Eight days later the affection disappeared.

LUBLINSKI had observed a laryngeal œdema in a patient, thirty-six years old, after the use of one spoonful of a five per cent. solution of iodide

of potash. By giving the medicament in milk, with the addition of belladonna, the œdema is prevented.

ROSENBERG had observed this form of intoxication twice.

LEWIN had never seen laryngeal œdema following the use of iodide of potash.

SCHEINMANN.—*Condylomata lata in the Larynx.*

Demonstration of a case cured by inunction, and locally by chromic acid.

LANDGRAF had, in one case, proved the nature of the affection by extirpation of a piece and microscopical examination.

SCHEIER.—*Case of Perverse Action of the Vocal Bands.*

A patient, forty-three years old, had often had attacks of suffocation, which frequently were so strong that tracheotomy was imminent. Such attacks were often repeated. The laryngoscope showed juxtaposition of the vocal bands. Only the glottis respiratoria remained open. No treatment had effect. The affection cured itself.

MUSEHOLD.—*Case of Morbus Basedowii cured by Operation upon the Nose.*

In a patient, forty-five years old, a morbus Basedowii, with all symptoms, was cured by galvano-caustic treatment of the swollen turbinateds.

SCHEINMANN had cured the same disease in a girl seventeen years old by the removal of adenoid vegetations.

KREZYWICKI.—*Case of Multiple Sclerosis with Vibration of the Vocal Bands.*

After phonation, at the beginning of respiration, the vocal bands move two or three times to the middle line.

Michael.

THE "NURSING RECORD" SCHEMES OF INSURANCE AND SICK FUND FOR NURSES.

WE are asked by the editor of the "Nursing Record" to notice two schemes, for the benefit of nurses, entered into by the proprietors of that journal and the Prudential Assurance Company, and the Sickness and Accident Assurance Association of Edinburgh. Of the former company, we may only remark that it is the largest industrial company in the kingdom. Of the latter, we may say that we know nothing, although it is said to have "an authorized capital of £225,000," and to have "paid already nearly £40,000 in claims." We will also remark that, while insurance is a very desirable thing, the advantages of which should be fully brought home to nurses and persons of small or precarious incomes, "sick-pay" schemes have invariably been unsuccessful. We have obtained the criticism of a competent and well-known insurance expert upon these schemes, which we think it our duty to reproduce in full, and the editor of the "Nursing Record" will doubtless give us credit, not for condemning honest endeavours to obtain such a desirable end as a workable scheme of insurance for nurses, but for honest criticism of the means of obtaining this end.

"RECORD" SCHEME.—No. 1.

A PROVISION FOR NURSES IN OLD AGE AND SICKNESS.

In setting forth the annuity scheme the "Record" starts with the deduction that the "Prudential" fund is the safest, because it is the

largest, and then follows a copy of the scales of rates for the purchase of deferred annuities published by that company, and two further tables combining annuity and life premiums. We are rather disappointed not to be directed to the special advantages claimed for nurses. We think this a point which should be most clearly expressed; to what end is the fact of their being contributors to the "Record"? and why the threepence to the editor for a form of application, which, we apprehend, would be hastily supplied by the Prudential Company on receipt of a post-card, or at the slightest intimation to any agent?

The "sick-pay" scheme appears to be the result of an arrangement with the Sickness and Accident Assurance Association, Limited, of Edinburgh, and here again we fail to find any statement or indication of special terms to nurses.

Assurance against sickness necessitates the embodiment of so many stringent conditions, and so much provision against ulterior motives and possibilities, that it has hitherto proved an extremely difficult problem to set forth a scheme at once safe to the promoters and acceptable to the public. The Prudential and other large societies have long since discarded this class of business for very good reasons, and it is a remarkable and important fact that a very large majority of the friendly societies assuring against sickness are brought out absolutely insolvent on actuarial investigation, so that we do not yet find ourselves in a position to give any encouragement to sickness assurance on the one hand or the other.

With regard to both these schemes, the "Record" certainly states in an explicit manner that they are strictly provident and business arrangements, and that no claim whatever is made to charity or philanthropy.

NEW PREPARATIONS.

Sedox.

THIS material, which is prepared from pure vegetable fibre, has been submitted to careful tests by us, and we can say of it that it is as efficient and clean a surgical dressing as we are acquainted with. Taking up fifteen times its own weight, it possesses remarkable absorbent powers. It can be readily medicated with any of the ordinary antiseptics. For cleanliness, efficiency, and absorbent properties, it is without doubt unrivalled by any of the other absorbent wools.

Balcomb's Books and Clinical Diagrams.

A SERIES of gummed diagrams, perforated at the margins for ease of detachment, is here presented, which cannot fail to be of great use as accessories to the ordinary clinical note records. These diagrams represent accurate reproductions of the ordinary anatomical appearances of the larynx, fauces, and naso-pharynx. They have also the merit of exceeding cheapness. We can highly recommend them for the purpose for which they are intended

NOTE.

SIR WILLIAM DALBY, having completed his term of twenty years as Aural Surgeon to St. George's Hospital, is now retiring from the post.

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SIR MORELL MACKENZIE, M.D.*

THOUSANDS who opened the morning papers of February 4th, and who knew the distinguished specialist only by repute, must have felt a shock on reading that the previous evening he had passed away with what must have seemed to many appalling suddenness. Those who had been privileged to know him intimately felt the grief which overwhelms those who lose a valued friend. Morell Mackenzie was not only a prominent public character, but a great man, and there is not a movement or development which has taken place connected with Laryngology for the last thirty years with which he has not been identified. The senior of all contemporary throat specialists in this country, he occupied a unique position, a place to which he was justly entitled by his years of unequalled experience, his extensive practice, and the magnificent work he has done. His was the scientific work which laid the foundation of an important specialty in this country, now followed by many enthusiastic workers, and perhaps there is scarcely an instance of a single specialist in this country, with the exception of quite the youngest devotees of the science of Laryngology, who has not fallen at some time under the influence of Mackenzie. All throat specialists—here and everywhere—must acknowledge how much they have been indebted to Mackenzie's teachings and writings; some, even, must acknowledge the direct assistance which has laid the foundation of their professional success, for Mackenzie was ever willing to hold out the helping hand. His influence upon Laryngology will undoubtedly be felt beyond this generation.

A review of Mackenzie's life and work is a retrospect of Laryngology

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* The portrait on the opposite page is published with the kind permission of the "Strand Magazine."

in this country for the past thirty years. Space would not permit us to treat this subject as it deserves, and we must confine ourselves to a brief review of Mackenzie's life and work.

The subject of this notice was born in July, 1837, at Leytonstone, now a suburb of London. Early led to the study of natural history, it is not surprising that the strong hereditary taste for scientific pursuits—his father and uncle being well-known medical practitioners in their day, his brother Stephen, who survives him, and two cousins having adopted this profession—should have led him to turn with longing to the medical profession as a chosen calling. Being one of a large family, early left with straitened means through the death, from an accident, of his father, he was, however, apparently destined to follow the (to him) uncongenial calling of a clerk in an assurance company, if the kindness of a relative had not provided him with the means and opportunities for adopting the career which he desired. If young Mackenzie had remained in commercial life he would, doubtless, have made his mark, for there was that about the man, determination to succeed, power of work, energy and devotion to duty, which would, in any adopted calling, have led him to final success. While still a student at the London Hospital these characteristics were evidenced by the medals and prizes awarded to him. Qualifying to practise in 1858, Morell Mackenzie went into residence in Paris for a year, studying especially under Trousseau, Nélaton, and Ricord. Afterwards, in Vienna, he sought the teaching of Skoda, Oppolzer, and Rokitsansky, Hebra, and others. In Austro-Hungary the young student received the stimulus which led to his being the chief founder of the science of Laryngology in this country. Manuel Garcia had invented the little "toy" which, as the "laryngoscope," was destined to revolutionize one branch of medicine. Czermak was experimenting with the mirror when Mackenzie, perceiving its great possibilities, determined to employ it as a scientific instrument for the diagnosis and treatment of diseases of the throat and larynx. Undoubtedly one of the first, along with Lewin, Gibb, Fauvel, and Rauchfuss, to show that it was possible to perform operations with this instrument upon parts of the throat until then hidden from view, Mackenzie would have been the first to introduce the laryngoscope into England, had not Czermak himself done this while the young surgeon extended his professional tour to Italy. Mackenzie's great merit consists in early appreciating the scientific value of this instrument, and in subsequently showing what wonderful feats could be accomplished in the treatment of ill-understood disorders of the larynx by the use of the laryngoscope. The credit of being the first in this country to remove a laryngeal growth by the aid of the laryngoscope properly belongs to Dr. Walker, of Peterborough, and the case was reported in the *Lancet* for November, 1861.

Upon returning to England from Italy, Morell Mackenzie became Resident Medical Officer and subsequently Registrar, at the London Hospital, and took his M.D. degree at London University in 1862. The year afterwards he obtained the coveted Jacksonian Prize of the Royal College of Surgeons, for a monograph upon "The Pathology and Treatment of Diseases of the Larynx," an essay which subsequently was expanded

into a complete work, entitled "Essay on Growths in the Larynx, with Reports, and an Analysis of 100 consecutive Cases treated by the Author," and published by Churchill in 1871. In 1865 his first work of importance was published, viz., "The Use of the Laryngoscope," which quickly went through three editions, and which the *British Medical Journal* described as "a most complete treatise on this subject." It was shortly afterwards translated into French, and was looked upon, both in England and on the Continent, as the best work ever published dealing with this subject.

In the preface to the former work its author remarked that though intending to publish the original prize essay in 1863, increasing engagements prevented him from at once carrying out this project, "and Laryngology made such rapid advances that the views of one year became almost an anachronism in the next." Under these circumstances he determined to publish from time to time a series of monographs on diseases of the throat, based on his original prize essay, but brought up to the most recent date. In pursuance of this scheme Mackenzie published his monograph upon "Nervo-Muscular Affections of the Larynx" as his second work of importance, a work which quickly reached a second edition, and which was welcomed by the *British and Foreign Medico-Chirurgical Review* "as a valuable contribution to our knowledge of laryngeal disorders," and by the *Medical Times and Gazette* as "the first attempt which has been made to discriminate between the several affections of its (the larynx) nervous apparatus, and to classify and treat them according to some scientific plan. Dr. Mackenzie has worked in a new field, in a scientific spirit, and the professions are under a great obligation to him for the progress he has already made in this unexplored region of clinical research."

This little—but important—work originated in a paper read by him at the Annual Meeting of the British Medical Association, in 1863, on "The Treatment of Hoarseness and Loss of Voice by the direct application of Galvanism to the Vocal Cords." Mackenzie originated the terms *abductors* and *adductors*, for the two sets of muscles which open and close the glottis. An attempt has latterly been made to substitute the clumsy and un-English terms of "glottis-openers" and "glottis-closers" for the expressions "abductors" and "adductors." In this monograph the diagnosis, etiology, pathology, and treatment of the various functional and real paralyses of the muscles acting upon the glottis are treated in a masterly way, and though something has been added during recent years to the physiology of the nervous mechanism of the larynx, Mackenzie's original work is, even to-day, of the greatest value, which shows the clearness and accuracy of his clinical observation.

Mackenzie's views upon the pathology of laryngismus in children were singularly sound:—"In children it appears to me that there is always an altered state of the nerve centres, or that the glottic nerves are abnormally susceptible to reflex impressions. Various alleged causes (dentition, indigestion, etc.) appear only to operate when one of these two conditions exists at the same time. The other symptoms (carpo-pedal contractions, etc.) point to cerebral disease or irritation. Further, it is only necessary to state here again that true laryngismus is essentially a

"spasmodic affection. In support of this statement I would remark—
 "first, that the other symptoms are those of spasm (contraction of the feet
 "and hands, etc.); second, that paralysis of the abductors of the vocal
 "cords permitting the unbalanced action of the adductors, does not
 "produce the intense stridor met with in the affection under considera-
 "tion; third, that the total remission of the symptoms points to spasm
 "as the essential feature of the disease; fourth, that where the age and
 "condition of the patient admit of laryngoscopic examination, the spas-
 "modic condition can be seen." The changes in the cerebral centres
 were thus regarded by the author:—"The rachitic dyscrasia is accom-
 "panied by morbid changes of a nutritive character in the structure of the
 "brain itself." This is the view essentially held to-day.

The amount of clinical material compressed into this little volume is great, and the book is instructive and valuable reading to-day, even after so much study has been devoted to this subject.

The early work on "The Laryngoscope" is still, after the lapse of nearly twenty years, a book which may be read with interest by all, and with the greatest possible advantage by those commencing the study of Laryngoscopy and Rhinoscopy. In this treatise are described several of the instruments and appliances which laryngology owes to Mackenzie, *e.g.*, the *rack-movement lamp*—still employed wherever gas is the illuminant; the *epiglottic pincette*, the object of which was to grasp and hold back the epiglottis during examination; the well-known *eclectic inhaler*; the *laryngeal lancet*; the *laryngeal electrode*; the *tube forceps*; the *common laryngeal forceps*; the *guarded wheel éraseur*; *laryngeal brushes*, etc.;—all of which instruments, notwithstanding the fertility of invention of various individuals during the past twenty years, still form an essential part of the equipment of every laryngologist. Of late years Mackenzie had, however, abandoned the use of the tube forceps, though in very many of the cases of laryngeal growths operated upon by him in his early years this was his favourite instrument. Mackenzie's laryngeal forceps are still, and are likely to ever remain, the most generally useful of all instruments for the operative treatment of laryngeal growths. He it was who introduced the method of making all laryngeal instruments bent at a right angle, instead of the curve at which all German laryngeal instruments are bent—an apparently small, though really very great and lasting improvement. He himself never attached much importance to claims for recognition for the introduction and invention of instruments, but there is no doubt that he possessed a great degree of mechanical ingenuity, and was very often able to devise improvements in existing instruments and mechanical contrivances necessary to deal with cases difficult of operation by the means already at hand. Everybody knows his *insufflator* and his *tonsillotome*, and his *œsophagoscope* was an ingenious contrivance for obtaining a direct view of a tract not amenable to direct observation.

Until Czermak first discovered a growth with the laryngeal mirror early in 1859, an honour which Mackenzie courteously referred to in the dedication to this surgeon of his important essay on laryngeal growths, the removal of these neoplasms had been performed only in a few cases and

in a very haphazard manner, unless where the surgical measure of opening the larynx and windpipe had been undertaken. Such interference was indeed rarely resorted to, unless the growth could be seen from the mouth, an event which was sufficiently rare, and the introduction of the laryngoscope gave the opportunity to Lewin to remark that "We have now the opportunity of diagnosing many growths which are so small and are so situated, that though they give rise to symptoms, they do not cause death. If death subsequently takes place from other causes, the larynx is either not opened at all, or is examined so superficially that small growths are very likely not to be recognized"; and, again, that "death has often been attributed to pulmonary apoplexy or œdema, which have been phenomena secondary to the obstruction of the larynx"; and, further, that "in the greater number of cases recorded before the invention of the laryngoscope, either no diagnosis was made, or the symptoms were attributed to phthisis, asthma, croup, ulceration of the larynx, spasm of the glottis, etc."¹

In 1854 Middledorff collected all the cases of laryngeal growths known up to that time. These amounted only to sixty-four, and of these there were only nine in which an attempt had been made to remove the growth by operating through the mouth, and of these direct incision into the neck was made in four instances, and in only four other cases was a serious attempt made to extricate the growth *per vias naturales*. From the time of the introduction of the laryngoscope up to 1870 two hundred cases of laryngeal growths alone had been operated upon, evidence of the great value of the laryngoscope; enough to silence those who had sneered at the new instrument as a useless toy. Between 1862 and 1870 Mackenzie alone had operated upon one hundred cases. Of these, eighty-nine were cases in which the voice was impaired or lost, and in seventy instances it was completely restored, and improved in the other nineteen.

When one remembers that these were days in which cocaine was unknown, the manual dexterity acquired by surgeons, who, like Mackenzie, and Fauvel, of Paris, operated upon large numbers of cases, must have been exceptionally great. What the means were to produce anæsthesia of the larynx preparatory to operation is thus described in a footnote in the Essay on Growths in the Larynx, as adopted by German surgeons:—"At seven o'clock in the evening the larynx of the patient should be painted twelve times with morphia; at eight o'clock, twelve times with chloroform; at nine o'clock, twelve times with morphia, and at ten o'clock, twelve times again with morphia. During the night the patient must be carefully watched, to see that narcotism is not excessive; and, if necessary, the patient must be stimulated by strong coffee, 'flipping' with towels, etc. At seven o'clock in the morning, twelve more applications of morphia; at eight o'clock, a laryngoscopic examination is made to ascertain if anæsthesia has been produced; if sensibility still exist, twelve more applications of morphia must be made; and so on every hour until the desired condition be established."

After this, let us all, patients and operators, bless the discoverer of

¹ Lewin, "Deutsche Klinik," 1862, quoted by Mackenzie in Essay on Growths in the Larynx, 1871.

cocaine. Until the latter important event, Mackenzie never relied upon anything to produce local anæsthesia more than the sucking of ice immediately before operation, an occasional whiff or two of chloroform, and sometimes a course of bromides; but he was more accustomed to rely upon his own unaided skill, and those (and they were many) who had the pleasure of seeing him operate for the removal of laryngeal growths with his forceps never failed to admire his exceptional dexterity. This manipulative skill was preserved to him to the last, even when his eyesight had to some extent failed him. The opinions formed by Mackenzie in his earlier years were those which dominated his practice throughout his later career. These led him to the conclusion that "*an extra-laryngeal method ought never to be adopted* (even where laryngoscopic treatment cannot be pursued) *unless there be danger to life from suffocation or dysphagia*," and he was not favourable to thyrotomy or excision of the larynx, except in cases of extreme necessity, and even in the case of malignant disease of the larynx he was more in favour of simple tracheotomy as a means of prolonging life than of the more radical measure of extirpation of that organ, a view to which the earlier statistics of these severe operations lent considerable support. Later in life, these views were to some extent modified in favour of partial excision, but in the main were retained by Mackenzie to the end.

In 1872 he edited the "Pharmacopœia of the Hospital for Diseases of the Throat," in which a great deal of useful information was contained as to special remedies for this particular kind of treatment. This work has long been nearly as indispensable to the dispensing chemist as the British Pharmacopœia. It is interesting to note that Morell Mackenzie was the first to suggest the use of the volatile oils (pine, juniper, thyme, cassia, cubebs, calamus aromaticus), etc., as a means of medicinal inhalation, and to devise the formulæ which now are employed, for their suspension in light carbonate of magnesia. Of the value of the steam spray as a means of inhalation he was thoroughly convinced, and was one of the earliest to employ it, and at one time there was a special "inhalation room" fitted up at the hospital where the out-patients could regularly attend for treatment. There are only two instances of Mackenzie's contributions to throat medical therapeutics, but in this branch, as in all others of this specialty, he was always fertile in invention and practical suggestion.

The essay on "Diphtheria," published in 1879, was the first work in English which had appeared upon this subject for twenty years. It was a carefully compiled *résumé* of the subject as known at that time, and contained many clinical observations of great value, which indeed could only be expected from a physician whose ripe experience had given him great opportunities for studying the disease in all its forms and phases. While the pathology, and especially the chemical pathology, of the disorder has since that time been enriched by much valuable scientific work, the therapeutics of diphtheria is even yet in a most unsatisfactory state, and the portions of Mackenzie's essay dealing with treatment especially may still be read with advantage by those called upon to deal with the disease. He was a strong upholder of the theory that diphtheria and laryngeal-

diphtheria, or croup, are one and the same disease. This is argued with considerable force in the chapter upon laryngo-tracheal diphtheria, and summed-up in the following words:—"The disease is called 'diphtheria,' and whether the lymph is deposited on the mucous membrane of the pharynx, or larynx, or trachea, or bronchial tubes, or on any other mucous membrane, or on a wounded surface, the disease is still 'diphtheria.' To suppose that these are two kinds of particular inflammations of the larynx, one in which the cause is the diphtheritic poison, and the other in which the cause is some other undiscovered influence, is totally opposed to all probabilities."

This work was translated into German, French, and Italian.

The essay on "Hay Fever, its Etiology and Treatment," was published in 1884, and rapidly ran through three editions. At that period the surgical treatment of the nose was being pursued with remarkable energy, and hay fever and the supposed nervous reflex disorders of the nose, having been made the subject of a remarkable memoir by Hack, of Freiburg, which commanded universal attention, and of many essays by American surgeons, one heard everywhere among rhinologists only of saws, chisels, galvano-cautery instruments, and of attempts to smooth down every irregularity of surface of the interior of the nose, to reduce the redundancy of errant turbinated bodies, to set straight again the septa which had deviated from the path of rectitude, and fortunate was the man falling into the hands of the rhinologist whose nasal organ escaped some sort of surgical improvement. Every rhinologist had his "theory," and the physiology of the nervous system was enriched with much literature, in which the "vaso-motor system" and the "sympathetic system" played the chief part. Much of this is fortunately forgotten, and the "theory and practice" of that period of excessive energy has given place to the more scientific practice of a more mature experience. Morell Mackenzie was a strong supporter of the so-called "pollen theory," which Blackley so ably upheld in his work on hay fever published in 1873, and showed his strong common sense by condemning the "meddlesome surgery" which was then in vogue. Recognizing a nervous erethism as an essential feature of the disorder, and pollen and dust as the exciting cause, his treatment was simple, and consisted of strengthening the nervous system by tonics, and protection of the affected parts from the external irritant, and if his treatment was not heroic, it was at least as satisfactory in results as the more brilliant surgical therapeutics.

This essay is a good example of its author's later literary method, and besides being a serious contribution to scientific literature, shows how it is possible to combine scientific writing with polished literary style.

Of Mackenzie's great work on "Diseases of the Throat and Nose" it is impossible to speak too highly. The first volume, which appeared in 1880, comprising diseases of the pharynx, larynx, and trachea, was quickly out of print, and but little remains of the first edition of the second volume, which comprised diseases of the œsophagus, nose, and naso-pharynx, and which was published in 1884. In these volumes was presented a clear and concise treatise on the subjects of which they treated, and the work was universally regarded as of great value. It is a

classical treatise, which must for years remain the model for similar efforts of the kind. It is replete with clinical material, and every chapter bears the impress of its author's individuality and unrivalled experience in throat work. It is not merely a book for the specialist, but one that ought to be in the hands of every practitioner, and its practical character makes it all the more valuable. It is a perfect storehouse of information, and, as was remarked by the *Medical Times* in reviewing the work, "we cannot but admire the splendid industry and perseverance which have combined to place before the profession so complete and scholarly a summary of such a wide and varied field of research."

The labour expended upon this work by its author must have been immense, especially when one remembers that every minute had to be snatched from the most exacting professional duties. This work was translated into German by Semon, formerly one of Morell Mackenzie's assistants, and also into French by E. J. Moure, assisted by Berthier and Charazac.

"The Hygiene of the Vocal Organs ; a Practical Handbook for Singers and Speakers," was first published by Macmillan and Co. in 1886. It has now reached a seventh edition. In the preface the author remarked : "For a quarter of a century I have been engaged in ministering to diseased throats, and every singer or actor of note in this country, with hardly an exception, has at one time or other come under my hands. I have thus had very unusual opportunities of studying the conditions which affect the voice for good or for evil, and my own observation has been assisted and supplemented by the personal experience of vocalists of world-wide celebrity." In this book Mackenzie contended with physiologists for two registers only, as opposed to the five which musicians adopt, and that the essential factor in chest production is the long reed, and in head production the short reed. A valuable table (as an appendix) is given in the book, of observations upon the singing larynx of males and females, and of the fifty cases presented, forty-four were trained singers and included such names as Nilsson, Albani, Valleria, Patey, Anna Williams, F. St. John, Brandram, Jessie Bond, Maas, Foli, Robertson, Coffin, Corney Grain, etc. An excellent and very valuable description is given of the appearance of the glottis in each class of voice, the production of the falsetto voice is scientifically discussed, and prevailing theories of the mechanism of the registers are thoroughly criticized. The rest of the book, of a more popular character, is devoted to such matters as training the singing voice, the speaking voice, and special hygiene for singers and speakers, and in each chapter very sound principles are inculcated and advice given. No man was more competent to deal with such matters than Mackenzie. That the work was useful as well as popular is sufficiently proved by its successful reception, and if anything further were needed to prove its value there is the fact that it has already been translated into French, German, Spanish, Italian and Danish.

Mackenzie's scattered contributions were numerous, and it would take long to collect a correct list of them. They are to be found in the pages of the *Lancet*, the *British Medical Journal*, the *Medical Times and Gazette*, the *JOURNAL OF LARYNGOLOGY* and "The Transactions" of the

Pathological, Clinical and Medical Societies, and many of them were reports of cases which afterwards formed the material for his larger works.

Morell Mackenzie was closely identified with the history of the foundation and growth of the Throat Hospital in Golden Square. Soon after commencing practice some of his medical colleagues at the London Hospital suggested to him the advisability of establishing a special hospital for the treatment of diseases of the throat. Accordingly, a suitable building was found in King Street, Golden Square, and for many years the practice of this institution grew, until, in 1883, it was thought desirable to transfer the hospital to its present site in Golden Square. Here a handsome building was erected, at a cost of £8000, and though a model of artistic design, nothing useful has been sacrificed for effect. Since the hospital was founded upwards of 100,000 patients have been treated, and it may safely be said that there is not quite such another institution in the world. It has been the model for many other hospitals, and has educated nearly every medical man, since Mackenzie's early connection with it, who makes much use of the laryngoscope. In his earlier years Mackenzie used to teach a great deal, devoting one of his visiting days at the hospital to the purpose, when he was always surrounded by an appreciative audience of medical men and senior students; but since some years ago he ceased to be an active member of the staff, he had taken but little part in the active conduct of the hospital in medical matters, though he was a constant attendant at the meetings of the Medical Council and General Committee. When the excitement over "tuberculin" was at its height Morell Mackenzie was one of the first to make experiments in this country, and gave several demonstrations at the hospital of its applicability to the treatment of lupus and phthisis. These observations subsequently appeared in the *JOURNAL OF LARYNGOLOGY*, and were reprinted and published by Davis, in 1891. This pamphlet had the melancholy interest of being the last medical publication of its lamented author.

For a long time the hospital had only accommodation for twenty-one beds, but within the past twelve months a children's ward has been added. The usefulness of this great institution is shown by the ever-increasing number of those who apply for its benefits. Now upwards of 7000 new cases are treated annually, the wards are always full, and further extension is being seriously contemplated.

Sir Morell Mackenzie was the first President of the British Laryngological and Rhinological Association, a body which was founded in 1888, under many difficulties and after exhibition of many jealousies. It is pleasant to record that this Society is now in a flourishing condition, numbers upwards of fifty members, and that the work done at its meetings will compare favourably with that accomplished at other societies, and this is largely due to the fact that those who have stuck to it loyally from the first have been determined to overcome all obstacles.

Morell Mackenzie was also one of the only two Honorary Fellows of the American Laryngological Association, Signor Garcia being the other, and was President of the sub-section of Laryngology at the International

Medical Congress, held at Copenhagen in 1884. He was a corresponding member of the Medical Societies of Vienna, Pesth, and Prague; a Fellow of the Medical, Pathological, and Clinical Societies of London; a member of the Société Française d'Hygiène; Consulting Physician to the Hospital for Diseases of the Throat, Physician to the Royal Society of Musicians, Consulting Physician to the North-Eastern Hospital for Children, and to the Islington and North London Provident Dispensary. He was also formerly Physician to the London Hospital, and Lecturer on Physiology and on Diseases of the Throat in the Medical School of that hospital.

Sir Morell Mackenzie was connected with this Journal from its inception. When, six years ago, the present writer, struck with the fact that there was no English-speaking journal dealing with this important and ever growing specialty, suggested to Mackenzie his intention of starting the JOURNAL OF LARYNGOLOGY AND RHINOLOGY, the latter entered into the scheme readily, and though never taking any active part in the editorial duties, was of the most material assistance in gaining the approval and active collaboration of many of his professional colleagues, and his interest in the welfare of the Journal was always evident. It was a pleasure to Morell Mackenzie to feel that the Journal ultimately attained to its present successful position.

That Mackenzie could be caustic in his writing was early exhibited in his book on "The Laryngoscope," as the following example will show:—"A facetious author observes" (with reference to brushes for laryngeal use) "that 'these brushes should be prepared by the practitioner himself, 'never purchased,' and that 'a person who can prepare his own brushes 'is a fit manipulator for local treatment of diseases of the larynx.' In a future edition I have no doubt that he will recommend the laryngologist "to catch his own camel, or at least ensnare his own squirrel, and he will "then remark that 'a person who can penetrate the African desert in "search of the camel, or climb the gnarled oak in pursuit of the nimble "squirrel, is a fit manipulator for local treatment of diseases of the "larynx.'" And in the third edition of this little work he referred in the preface to a circumstance he subsequently suffered from greatly, viz., the appropriation of his drawings, sometimes without acknowledgment. In this particular instance the appropriator boldly annexed the drawings as his own. "The best evidence of the appreciation of a book," he said, "is "no doubt to be found in its sale; but were I to seek for further testimony, "I should refer to the fact that the only other systematic text-book on the "laryngoscope, published in this country, is based entirely on my treatise, "and to the circumstance that its author has paid me the very flattering, "though somewhat unusual compliment, of allowing several of my drawings to appear as his own."

It may be here remarked that the illustrations contained in Mackenzie's many books have been copied into nearly every work on these various subjects since written by others. These illustrations were nearly always original, and he seldom borrowed from others.

Many examples of Mackenzie's ready wit, good-natured satire, and humour could be culled from his various books and essays. He was

facile in writing, and a purist : always concise and terse, what he had to say was said in the most direct manner, and without redundancy of expression ; logical in setting out his ideas, scholarly and often graceful in his treatment of language, there is a charm about most of his written works, even in those dealing with purely scientific subjects, which makes the reading of his books and essays a pleasurable task. The dry bones of controversy he knew well how to clothe with good-natured satire and humour. Only once did he indulge in ill-natured language which overstepped the bounds of fair criticism—a regrettable instance, but one where he felt himself smarting under a sense of injustice and wrong. This may now surely be forgotten, and due meed of praise be given to the man for the great work which he accomplished during his lifetime. For this we must all feel admiration. There is not a book or essay written by Morell Mackenzie, upon laryngological subjects, which may not to-day be read with profit.

It is the fate of most books upon scientific subjects to become, within a short time, antiquated, and their matter ancient history. This is not the case with Mackenzie's work, and this is due, not to the fact that laryngology has lagged behind in the advance of knowledge, but to the circumstance that everything that Mackenzie wrote was of eminent practical value ; his opportunities for clinical observation were unrivalled, and his written work is replete with the results of such clinical study. In many instances, as has been remarked by a distinguished laryngologist, Mackenzie was prophetic in his utterances. To properly estimate the value of his scientific writings, we must carry ourselves back to the periods at which his earlier works appeared. Compared with such writings as were then existent, his own marked a gigantic advance, and when we reflect that to-day there is little to be added to what he wrote years ago, the solid value of his scientific work will be duly appreciated. How he found the time to contribute so much to medical literature is really marvellous, considering the inroads into his time which his really enormous practice made. But he was a man who never wasted one minute of the day. Retiring late, and rising early, his whole time was devoted to professional pursuits, and even the hours spent in travelling and journeying from place to place were occupied. One of the few relaxations which Mackenzie allowed himself was chess, a game to which he was greatly devoted, and at which he was no mean proficient. When he took his annual vacation, he was not content to abandon himself to the pleasures of the hour, and to seek recuperation of his bodily energies in sweet idleness and relaxation, but his restless spirit carried his fatigued and overworked body from end to end of Europe and America—now visiting health resorts in pursuit of information—now enquiring into the condition of leper hospitals—now making a professional tour through the United States, visiting old pupils and professional friends and colleagues, always combining the enlargement of his scientific ken with what could be obtained by bodily relaxation. If Morell Mackenzie had permitted himself to make the latter consideration of foremost importance, his life might possibly have been prolonged. Restless mental energy wore out a physical frame

never too robust, and for many years weakened and impaired by chronic asthma, to which he was a martyr.

Sir Morell Mackenzie was a man of great refinement and cultured tastes, and he loved to surround himself with the best of all that art and literature could give; he could never tolerate the commonplace, and felt a contempt for respectable mediocrity. Very reserved and self-contained, his was, like all such natures, an extremely sensitive temperament, quick to appreciate and to value kindness, and to resent injustice. Such natures are very apt to be greatly misunderstood, and Mackenzie suffered in this respect as other similar natures have done before; added to which, it is the penalty of eminence and success to receive shafts barbed with malice and spite, and even if these are sometimes Lilliputian they nevertheless sting. Who shall blame the trodden worm for turning? or Quinbus Flestrin for endeavouring to break his bonds?

Mackenzie was a good conversationalist, an excellent *raconteur*, and his "table-talk" was always charming, and enlivened with much humour. His long experience of men had enriched his memory with many amusing incidents, and a dinner table at which Mackenzie was present was never dull; when it comprised also the company of some of those eminent on the stage, and in literature, who were among Mackenzie's intimate companions, it may well be imagined that the fun was "fast and furious." Scarcely an actor or singer of repute but has had cause to value his friendship, and to appreciate his professional skill, while hundreds of struggling artists, and persons of straitened means, who were never refused his best services, mourn his loss. What the stage thought of Morell Mackenzie was shown by the splendid testimonial which, at a dinner in aid of the funds of the Throat Hospital, in 1889, the actors of London took the opportunity to present him with. This consisted of a magnificent silver bowl, on which was the following inscription:—"To Sir Morell Mackenzie, M.D., a grateful tribute of regard from those whose names are inscribed in this bowl. July 6th, 1889." The bowl contains *fac-simile* signatures of the subscribers to the testimonial, and amongst many others occur the names of Henry Irving, Ellen Terry, W. H. Kendal, Wilson Barrett, John Hare, Tom Thorne, Henry Neville, J. L. Toole, Edward Terry, Brandon Thomas, &c.

On this occasion Lord Randolph Churchill, who took the chair, referred in an eloquent manner to the eminent services of Sir Morell Mackenzie to medical science, and to the great and lasting benefits which the institution with which his name was identified had conferred on the public, and Mr. Henry Irving, who presented the testimonial on behalf of his colleagues, followed with a speech which conveyed the warm and lasting regard of his profession to the eminent specialist.

That Mackenzie had the regard of those highest in the social scale has been abundantly shown. Among the many autograph photographs in his consulting room were those given to him by the Queen, the Emperor and Empress Frederick, and the Marchioness of Lorne (Princess Louise), and framed was the letter from the Queen to the Emperor Frederick, in which Her Majesty expressed her intention of conferring the dignity of knighthood upon the distinguished physician. Many were the gifts which

Sir Morell Mackenzie received from the late Emperor and the Empress, and there is not the slightest doubt that the former preserved for Mackenzie to the end the greatest affection and regard ; and that the latter distinguished lady shared the same sentiments has been proved by the interest she has taken in the hospital to which Mackenzie was enthusiastically devoted, and which she has more than once visited since her husband's death.

Representatives of the Empress Frederick and of the Prince of Wales were present at the memorial service to Morell Mackenzie, and amongst the wreaths and crosses, to the number of over two hundred, which formed a sad but beautiful tribute to the respect and affection in which Mackenzie was held, were conspicuous, contributions from the Empress Frederick of Germany, and the Prince of Wales. Everybody knows that the late Emperor Frederick conferred upon his devoted physician the Grand Cross and Star of the Royal Order of Hohenzollern, and everybody knows also the story of the unseemly professional squabbles which occurred before and after the death of that illustrious sufferer. To quote the words (from the *Standard* of February 4th) of the writer of his obituary notice, "Whatever may have been the deceased physician's relations with his "German colleagues in attendance on the late Emperor, and into whatever "mistakes he may have been led by the peculiar circumstances of the "case, he enjoyed the satisfaction of receiving the thanks of the Empress "Frederick and the Queen for his devoted services, and in 1887 obtained "the material recognition of knighthood. Few men have been placed in "a position at once of so much delicacy and so much publicity, and one "in which it would have been so difficult to avoid hostile criticism. * * * "It must be remembered that he had been the subject of a bitter attack, "which affected his personal credit and medical skill, and one which it "was not easy to submit to without retort. Whatever may be thought "about his original diagnosis of the Emperor's case, no qualified judge "has seriously disputed the medical skill and personal devotion displayed "by the late Sir Morell Mackenzie on behalf of his illustrious patient."

He was laid to rest in the pretty country churchyard at Wargrave, on Monday, February 8th, 1892, with every mark of public sympathy and respect from the crowd of mourners present.

A LIST OF THE PUBLISHED WORKS OF SIR MORELL MACKENZIE, M.D.

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The Laryngoscope. (Longmans, Green & Co., 1865.) Three Editions.

Essays on Throat Diseases. (Churchill.)

1. *Hoarseness, Loss of Voice, and Stridulous Breathing.* 1868.
Two Editions.

2. *Growths in the Larynx.* 1871.

3. *Diphtheria, its Nature and Treatment.* (Churchill, 1879.)
Three Editions.

The Pharmacopœia of the Hospital for Diseases of the Throat.
(Edited by Morell Mackenzie, 1872.) Four Editions.

A Manual of Diseases of the Throat and Nose.

Vol. 1. *The Pharynx, Larynx, and Trachea.* (Churchill, 1880.)

„ 2. *The Œsophagus, Nose, and Naso-Pharynx.* (Churchill, 1884.)

Hay Fever and Paroxysmal Sneezing. (Churchill, 1884.) Three Editions.

The Hygiene of the Vocal Organs. (Macmillan, 1888.) Seven Editions.

Frederick the Noble. (Sampson Low, Marston & Co., 1888.)

Leprosy of the Air-passages. Reprinted from the JOURNAL OF LARYNGOLOGY. (Churchill, 1888.)

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The New Yachting. "The Fortnightly Review," June, 1891.

Training: its Bearing on Health. "The New Review," Oct. and Nov. 1891.

The Training of the Voice in Youth. "The Youths' Companion," Boston, Mar. 27th, 1890.

Medicine as a Profession. "The Youths' Companion," April 30th, May 7th, May 14th, 1891.

Hidden Causes of Disease. "The Youths' Companion," Feb. 4th, 1892. Part 1. *R. Norris Wolfenden.*

THE ELECTRIC LIGHT IN ANTRAL DISEASE, ETC.

By W. ROBERTSON, M.D., Surgeon Throat and Ear Hospital,
Newcastle-on-Tyne.

(Continued from page 67.)

[A FEW remarks demonstrative of illustrations (unfortunately omitted in last issue) may not seem uncalled for. Primary batteries would appear—at any rate in England—to be about to be tabooed, now that electric supply companies are so much *en évidence*. This is not the place to argue this point in full: suffice it to say that I have counted the cost and found the primary battery here represented by far less expensive than the current, and quite as efficacious and reliable, and equally well fitted for light or cautery. In the diagram, Z refers to a rod which indicates the position of the plates, in or out of the fluid. R is a winch to lower or raise the plates out of the fluid. G L and G represent terminals for galvano-cautery purposes. G L—L, terminals for lighting. O, rheostat. I., II., III., shunts, II. being for lighting, I., III. For galvano-cautery the plates are accurately immersed by a check chain, lighting being worked by a rheostat. The battery requires only three renewals of fluid yearly.

H represents the handle provided with a switch, and which, when provided with the cap B (to which an irrigator can be applied), is ready for use to illuminate the frontal sinuses. Z is the part which, when substituted for e in Fig. H, forms the part to place on the tongue and illuminate the antrum. The lamp is well illustrated, and has an enamelled reflector. The last illustration is a forehead light, which does excellent service in laryngoscopy and examination of the nose and ear, and generally as an electric search-light in all surgical proceedings.]

I shall now briefly relate the important points in the two cases referred to: Louisa T., aged nineteen, came under my care three years ago, complaining of swelling of the left cheek and pain in that region, also of a feeling of cold in the head, parosmia, and foul discharge from the nose, especially from the left nostril. There were also present nasal obstruction, anæmia, lassitude, depression, &c. Patient states that when aged four years she suffered from a kick over the left side of the nose, which took long to heal; two years before she presented herself parosmia was noticed.

Examination of the left nostril showed injected mucosa, greatly infiltrated over the inferior and middle turbinateds, with pus issuing from the middle meatus. The right nostril was the seat of a chronic catarrhal process, which a short course of treatment cured. The left side, however, remained unaffected by any remedy employed, *e.g.*, syringing out the antrum by the natural opening, &c. Finally, about six months ago, I gained the consent of the parents to operation. Before operating I employed the light, with the following results: the whole of the antral area, on the left side, was seen in deep shadow, from the inferior eyelid to the alveolar margin, an unmistakable dense black,

as I was able to demonstrate to the members of the Northern Branch of the British Medical Association, then assembled at Sunderland. I contrasted the diseased antrum with its fellow, on the same patient, and next with a brother of the patient, a young, healthy lad, whose antra were freely illuminated, and showed the light spots under the eyes well.

Shortly after, under chloroform, I operated as follows: raising the lip, I made a transverse incision down to the bone at the junction of the cheek and gum over the canine fossa. Then with a broad dermal curette the tissues were raised so as to expose the anterior wall of the antrum freely. Retractors were used to lift up the soft parts, and a dentist drill passed into the antrum over and slightly in front of the first molar tooth (all the teeth were sound in this case). With a pair of cutting forceps sufficient bone was removed to admit the finger, with which the cavity was explored, and found to contain a quantity of thick inspissated pus. With the electric search light, the lining membrane of the antrum was seen to be immensely infiltrated, so much so that it appeared to fill the whole cavity. It was soft and velvety to the touch, and bled freely on manipulation. The curette, a broad dermal one, was freely used, and all diseased structure removed, which resembled closely soft adenoid structure. Every part of the lining membrane was equally diseased, and the process of curetting was attended by very free hæmorrhage which, however, soon ceased. A large drainage tube was placed along the floor of the antrum, flush with the opening.

The subsequent treatment consisted in freely irrigating the cavity with hydrogen peroxide and the insufflation of powders, such as auramine, salfaminal, &c. The patient was also directed to take boric lotion into the mouth, and force it into the antrum through the artificial opening, when it generally discharged itself through the natural opening into the nose, three or four times daily. This was used after meals, and always without pain or inconvenience. No food ever escaped into the antrum at meals, nor did the drainage tube cause any pain. As the opening contracted and the discharge diminished, a lead spigot was substituted for the drainage tube. This gave no trouble or pain, and was readily manipulated by the patient. In six weeks' time after the operation all pain and swelling of the cheek had gone. The discharge from the nose and general discomfort there had long ere this vanished. *When the electric light was now placed in the mouth it showed the left antrum well illuminated, and the light spot under the left eyelid distinctly present.*

Later on I demonstrated the condition with the electric light before a meeting of the Newcastle-on-Tyne Clinical Society.

Present condition: nasal respiration fully restored; healthy nasal exhalations; the interior of both nares normal in every respect; the anterior wall of the left antrum solidly repaired; general health and spirits all that could be desired.

Miss Sarah S., aged twenty-seven, presented a history of parosmia, first noticed eight years ago, giving place to anosmia two years later. No sense of taste for five years. Teeth carious throughout periods mentioned. Almost complete nasal obstruction, with profuse foul discharge from both nostrils. Paralysis of the right ala nasi. She complains besides

of tinnitus in the right ear, from which she has had a discharge on two different occasions. Headache, depression, and occasional slight rigors are experienced.

Examination of nares.—Right: polypoid hypertrophy of the middle turbinated; the middle meatus full of polypi, lined on the lower surface with curdy pus, which also issued from the anterior extremity of the middle turbinated; the lower turbinated greatly hypertrophied, and filling the inferior meatus. Left: the seat of angular vertical deviation of the septum itself the seat of hyperplasia; polypoid condition of the middle turbinated, and pus present in the middle meatus.

The electric light in the mouth showed both antral regions in deep shadow; the light showed both frontal sinuses clear; with a syringe (fitted with an Eustachian catheter) filled with a weak carbolic lotion, I succeeded in dislodging a most foul discharge of thick pus from each antrum. Preliminary to gaining consent to operate I extracted all the polypi I could; with scissors I excised all redundant tissue from the inferior right turbinated, and regularly washed out the antra *per vias naturales*. The last step had no noticeable effect on the quantity or quality of the discharge generated, and was, besides, painful.

Dec. 21, 1891.—With patient's consent she took chloroform, Dr. Oliver kindly giving the anæsthetic, and honouring me with his assistance. I operated on both sides as in the former case. Each cavity appeared after the usual amount of pus was removed to be filled up with the enormously infiltrated mucosa. The curette was freely used, causing sharp bleeding, which, however, soon ceased. Drainage tubes as in the last case. Patient suffered no shock, and only slight swelling of the tissues next morning.

Dec. 28.—Swelling of the cheeks has disappeared; discharge from the left nostril *nil*; still free from the right, which cannot be irrigated quite so freely as the left by the patient, who uses the lotion as above three or four times daily. She suffers no inconvenience from the openings during mastication, no particles of food ever entering the antra. Rhinoscopy shows subsidence of the inflammatory changes in the left naris, which is less noticeable in the right. Electric light shows the left antrum clearing up rapidly—a slower approach to the same also on the right. Exploration of the antral cavities with electric search lights shows each cavity lined with rugged pus-covered membrane. With the probe no bare bone can be discovered. The openings discharge freely into the mouth, the rush of fluid being noticed by the patient, and provided for, or can be blown out by the patient at will. The health is much improved, and the complexion clearer and brighter.

(To be concluded.)

NEW INSTRUMENTS, THERAPEUTICS, AND DIPHTHERIA.

Lamann (St. Petersburg).—*The Incandescent Lamp and the Application of Resistance in Accumulators.* "Monats. für Ohrenheilk.," 1891, No. 11.

TECHNICAL remarks.

Michael.

Villon.—*A New and Powerful Light.* "Lancet," Jan. 2, 1892.

THE substitution of an aluminum ribbon instead of magnesium, burning in a spirit lamp, or for greater brilliancy in a coal-gas or spirit flame supplied with a jet of oxygen. This is practicable, but a still more intense light may be got by blowing a powder of aluminum, mixed with a quarter of its weight of lycopodium and a twentieth of its weight of nitrate of ammonium, into the lamp, flame with a jet of oxygen in its centre.

Dundas Grant.

Freudenthal (New York).—*The use of Accumulators in Medical Practice.* "Monats. für Ohrenheilk.," 1891, No. 8.

RECOMMENDS the use of the author's modification of Gibson's battery (made by J. W. Ford and Co., New York).

Michael.

Salinger, Julius L.—*A Case of Antipyrin Poisoning, with the Formation of Membranes in the Mouth, and Symptoms of Laryngismus Stridulus.* "Internat. Journ. of the Med. Sciences," May, 1890.

A CLINICAL report of a case. The author believes antifebrin, exalgin, and phenacetin to be free from liability to such results.

Hunter Mackenzie.

Leslie, George (Falkirk).—*On the Cure of Facial Neuralgia, Odontalgia, and Allied Neuroses.* "Edinburgh Med. Journ.," Jan., 1890.

THE author recommends the snuffing up or insufflation into the nose of common salt.

Hunter Mackenzie.

Wright, Jonathan (Brooklyn).—*Salol in Acute Tonsillitis and Pharyngitis.* "Internat. Journ. of the Med. Sciences," Aug., 1890.

THIS remedy is said to be very efficacious in lacunar tonsillitis, and less so in follicular angina.

Hunter Mackenzie.

Bristowe, J. S. (London).—*Diphtheria at Wellington College.* "Brit. Med. Journ.," Jan. 9, 1892.

DR. BRISTOWE, in a report to the Governors of the College regarding an outbreak of diphtheria, confesses his inability to trace the source from which the specific infection entered the institution. Several sanitary defects were found, which, however, cannot be accepted as the cause of the outbreak.

Hunter Mackenzie.

Smith, Charles (Casterton, Australia).—*A New Method of Treating Diphtheria*. "Lancet," Jan. 2, 1892.

ONE part of carbolic acid, one of eucalyptus oil, and eight of turpentine, are mixed and used for saturating two cloths about a foot square. Of these cloths one is placed close to the face, the other on the pillow near the head; one or two others are hung about round the cot. This need not interfere with other modes of treatment. *Dundas Grant.*

Rabot and Philipp.—*Myocarditis Diphtheritica Acuta*. "Allg. Med. Centralzeitung," 1891, No. 87.

THE author reviews the well-known symptoms of weakened heart in diphtheria. Of five hundred cases of diphtheria, the complication was observed in twenty-two cases, of which ten were cured. Treatment consisted in absolute rest, digitalis, and analeptics. *Michael.*

Spronk (Utrecht).—*Diphtherial Infection of Tracheotomy Wounds*. "Lancet," Jan. 2, 1892, from "Centralbl. f. Allgem. Path. u. Path. Anat.," 1892.

IN several cases an œdematous swelling of the tissues around the wound was observed without any necrosis of the surface of the wound itself. Cultures from the serum showed the presence of the bacillus. He ascribes the immunity of the wound surface to the action of the iodoform applied to it. *Dundas Grant.*

Kayser (Breslau).—*Report on the Cases treated in the Private Polyclinic of Professor Gottstein in the year 1891*. "Monats. für Ohrenheilk.," 1891, No. 7.

REPORT covers 1194 cases of diseases of the throat and nose, with some remarks bearing thereon. *Michael.*

Welch-Flexner.—*Histological Changes in Experimental Diphtheria*. John Hopkins Hospital Reports, 1891.

IN a paper entitled "Histological Changes in Experimental Diphtheria," Drs. Welch and Flexner ask the question whether the changes in internal organs in human diphtheria have their counterpart in animals inoculated with the Klebs-Löffler bacillus. Reference is made to the work of Löffler, Klein, Beck, and others, and particularly to Babes, whose investigations on these points relate chiefly to the liver and kidneys of rabbits. The present observations were made with the view of ascertaining the histological changes in all the organs of animals which had died of experimental diphtheria. In the course of the work guinea-pigs, rabbits and kittens were used. The cultures were obtained from undoubted cases of primary diphtheria, and the inoculations were made into the subcutaneous tissue of the abdomen midway between the axillary and inguinal regions. The gross anatomical lesions which were observed, correspond, for the most part, with the description by other investigators. Locally there was a greyish necrotic pseudo-membranous focus, and surrounding this a deep-red zone of

varying size. The changes in the various parts of the body are carefully noted. These occurred in the subcutaneous tissue and the cavities of the body, while the liver and spleen were congested. Bacilli of diphtheria were found regularly at the seat of inoculation. Cultures were made from the blood, liver, and spleen of these animals with negative results in every case.

John Macintyre.

Abbot.—*The Relation of the Pseudo-Diphtheritic Bacillus to the Diphtheria Bacillus.* "John Hopkins Hospital Bulletin," Aug. 1891.

THE author states that previous experiments, in eight cases of true diphtheria, had failed to find any evidence which would lead him to believe that there existed in the organisms which had produced the disease any appreciable variation in the degree of their virulence towards susceptible animals. Attention was also called to the fact that they failed to detect the pseudo-bacillus. In the eight cases Löffler's bacillus was found, and it was impossible to make out definitely any variation in the pathogenic properties. The author describes two cases where the group of symptoms made it very difficult, if not impossible, to make a satisfactory diagnosis. There was little to indicate diphtheria. As a result of his experiments and cultures, the author states that he feels justified in agreeing with the opinion that has been advanced by other observers, particularly Hoffman, Roux and Yersin, viz. : that in the varying conditions the virulence of the two diphtheria bacilli may be observed to fluctuate in the degree of intensity to such an extent that there may be a complete absence of pathogenic power. He is inclined to believe, in other words, that the true diphtheritic bacillus had for some reason or another lost its virulence.

A Second Communication from the same Author.—In this communication the author extends his observations, and arrives at pretty much the same conclusion. Many experiments have been performed with the view of distinguishing the difference in appearance, growth, and pathogenic virulence of the organisms which resemble each other.

John Macintyre.

Prudden, Mitchell.—*Experimental Pneumonitis in the Rabbit.* "New York Medical Journal," Dec. 5, 1891.

THE author writes about the difficulties found in coming to a conclusion regarding acute and chronic tuberculosis, and their relation to inflammatory processes. In a paper recently published the author, with Dr. Hodenpyl, showed that dead tubercle bacilli possess "not only positive chemotactic power, but are in a markedly peculiar way capable of stimulating various phases of cell-proliferation." A large number of experiments were performed, and the author summarizes thus: This study shows that when dead tubercular bacilli are introduced in small flocculi into the air spaces of the rabbit's lung there occurs, at the seat of introduction, a large accumulation of small spheroidal cells in the air spaces; next proliferation of epitheloid cells and formation of giant cells: afterwards necroses, disintegration and absorption of the primary small-celled centre, with the conversion of the peripheral zone into

various cellular and vascular new connective tissue. Ultimately the seat of the lesion is indicated by a patch of dead connective tissue. The primary difference between the action of the dead and living tubercle bacillus in the rabbit appears to be that the living bacillus proliferates in the body and produces an acute infectious disease, while the dead bacillus does not.

John Macintyre.

NOSE AND NASO-PHARYNX.

Baumgarten (Budapest).—*Rare Reflex Neuroses of the Ear, the Nose, and the Pharynx.* "Monats. für Ohrenheilk.," 1891, No. 8.

A LADY, fifty years of age, suffered from periodical recurring nervous rhinitis. When the attack occurred she used daily fourteen to sixteen handkerchiefs, which were saturated with clear moisture in a short space of time. After mental excitement the attack was especially strong, accompanied by an acute pain in the region of the left eyebrow, particularly if she touched the nose, so that she had to use great precaution in blowing it. No good results from antipyrin, but improvement came with the use of the Faradic current, galvano-caustic treatment of the turbinateds, and inhalation of steam.

Michael.

Nitsche (Salzbrum).—*Bilateral Nasal Stones.* "Monats. für Ohrenheilk.," 1891, No. 7.

A LADY, forty years of age, had since her youth a bloody secretion from the nose, and pain in the frontal bone. In each of the nasal cavities a rhinolith had formed about the size of a cherry stone. Extraction. Cure.

Michael.

Hessler (Halle).—*Laminaria as a Foreign Body in the Nose.* "Münchener Med. Woch.," 1892, No. 2.

THE patient, seventeen years old, was treated, when a year old, for stenosis following small-pox, by introduction of a piece of laminaria into the nose. The piece was forgotten to be removed. Since that time obstruction of the nose and strong fœtor. The stenosed introitus of the nose was dilated by application of laminaria, and some days later it was possible to extract the foreign body but with some difficulty. It was an incrustated piece of laminaria. The fœtor and the obstruction disappeared in a short time.

Michael.

Cholewa (Berlin).—*Resection of the Septum Narium.* "Monats. für Ohrenheilk.," 1891, No. 9.

SLIGHT modification of Krieg's (Stuttgart) method (report, 1890).

Michael.

Krieg (Stuttgart).—*Answer to Cholewa's Paper on Resection of the Septum Narium.* "Monats. für Ohrenheilk.," 1891, No. 10.

POLEMICAL article.

Michael.

Hausberg (Dortmund).—*Answer to Grünwald's Remarks on his Paper on the Cure of a large Typical Naso-Pharyngeal Polypus.* "Monats. für Ohrenheilk.," 1891, No. 8.

POLEMICAL article.

Michael.

Grünwald (München).—*Answer to Hausberg's Paper.* "Monats. für Ohrenheilk.," 1891, No. 10.

POLEMICAL article.

Michael.

Clegg, W. T. (Liverpool).—*Fracture of the Nasal Septum.* "Lancet," Jan. 2, 1892.

TWO cases in the past year, in both of which the septum was displaced so as to occlude the left nostril. The right ala in each case flapped-to in inspiration, so as to make nasal breathing an impossibility. Cross cuts were, in one case, made through the cartilage. This was then pushed into its place, and kept there by means of a plug. Perfect result in three weeks.

Dundas Grant.

Schmidt, Moritz (Frankfurt-a-Main).—*Insuction of the Nasal Alæ.* "Deutsche Med. Woch.," 1892, No. 4.

IN some persons the nose closes during inspiration by insuction of the lateral parts, although no obstruction caused by neoplasms or swellings may be discovered. These patients experience the same inconvenience as if the nose were choked by a pathological process. The author has cured this trouble with the aid of a small, ingenious instrument, the invention of Feldbausch.

Michael.

Shurley.—*A Case of Supposed Nasal Tuberculosis in a Monkey.* "New York Med. Journ.," Nov. 7, 1891.

A LARGE quantity of glairy discharge was ejected daily, and on microscopic examination tubercle bacilli were found in large quantities. The curious thing in the case was that no evidence of tuberculosis could be found in the animal after death, and the author suggests saprophytic existence.

Casselberry.—*On the Radical Treatment of Nasal Polypi.* "New York Med. Journ.," Nov. 14, 1891.

THE author reviews the subject, and describes his methods of operation. He is of opinion that the myxomatous diathesis will be found in the local deformity and neurological defects which, in the individual case, cause simple œdema or vaso-motor impairment. He pleads, therefore, for a free nasal passage for respiration, drainage, vision, and instrumental manipulations.

Poppert.—*Case of Osteoma of the Frontal Sinus.* "Münchener Med. Woch.," 1892, No. 3.

THE patient, aged twenty-six, had been suffering for nine years from a growing swelling in the frontal cavity. Although not much inconvenienced by the tumour, he was anxious for an operation on account of its rapid development and the consequent malformation. Examination showed a hard tumour and dislocation of right bulb. Operation by Prof. Bose.

The affected part of frontal wall was removed with chisel and elevator. A lobed tumour was found in the right frontal sinus, having processes in the left sinus, the nasal cavity, and the orbit. Tumour removed with the chisel. The meningeal wall of the frontal cavity was opened by the operation. Tamponing with iodoform gauze. Cure. *Michael.*

Albespy, Daniel (Rodez).—*Adenoid Tumours and Hypertrophy of the Turbinated Bodies with the Phenomena of Vascular Stasis in the Cerebrum and Catarrhal Conjunctivitis, and without Aural Trouble.*

A CASE of aprosexia and conjunctivitis both cured by removal of the "adenoids" and cauterization of the turbinated bodies. The physiological features peculiar to post-nasal adenoids were present.

Dundas Grant.

Robertson, W. (Newcastle-on-Tyne).—*Double Empyema of the Antrum of Highmore.* "Brit. Med. Journ.," Jan. 2, 1892; Newcastle Clin. Soc., Dec. 17, 1891.

EXHIBITION of case illustrative of the use of the electric light in diagnosis. *Hunter Mackenzie.*

MOUTH, TONSILS, PHARYNX, AND ŒSOPHAGUS.

Editors of the "Lancet."—*Artificial Teeth from a Hygienic Point of View.* "Lancet," Jan. 2, 1892.

CLEANSING of artificial teeth is often carelessly attended to. The insides of the "clasps" are apt to escape the brush, and hence harbour decomposing matter which sets up rapid caries at the neck of the tooth. Vulcanite plates sometimes cause "sore mouth," possibly due to their retaining deleterious matter, especially if insufficiently vulcanized. [We have read recently that dental-plates can be completely cleaned by being dipped in a mixture of equal parts of dilute hydrochloric acid (B.P.) and water. A subsequent immediate immersion in a solution of soda would, no doubt, be desirable.] *Dundas Grant.*

Williams, W. Roger (London).—*Excision of the Tongue by the Wire Ecraseur.* "Brit. Med. Journ.," Jan. 2, 1892.

THE writer traverses the statement of Mr. Hutchinson, as to excision of the tongue being "a procedure that does not really involve any risk of life." The statistics of the Middlesex Hospital show nine deaths in fifty-four cases (16·6 per cent.). In twelve cases operated on by the wire écraseur there were five deaths. *Hunter Mackenzie.*

Morton, C. A. (Clifton).—*Tuberculous Ulceration of the Tongue, with Sections showing Bacilli.* "Brit. Med. Journ.," Jan. 9, 1892; Path. Soc. of London, Jan. 5, 1892.

EXHIBITION of specimen, taken from a man aged fifty-five. The ulcer was at the tip of the tongue, and was formed by the coalescence of

several minute ulcers. There was less induration than in epithelioma. The submaxillary glands were caseous, and there was advanced pulmonary and laryngeal phthisis. Dr. Penrose mentioned a case in which there was a tuberculous ulcer of the tongue, just in front of the epiglottis, in a child who had died of pulmonary and laryngeal phthisis. Dr. Hadden had seen many instances of tuberculous lingual ulceration, in some of which that affection appeared to be the initial tuberculous lesion.

Hunter Mackenzie.

Guthrie, Leonard (London).—*A Toad whose Mouth and Nostrils were attacked during Life with the Larvæ of Blow-Flies.* "Brit. Med. Journ.," Jan. 23, 1892; Path. Soc. of London, Jan. 19, 1892.

EXHIBITION of preparations. The frequent occurrence of this condition in toads and frogs was probably due to the eggs being laid in the host's mouth whilst being swallowed. Reference was made to the cases of convicts, whose nostrils and eyes had been almost entirely devoured by the larvæ of the golden-fly with fatal results. Dr. Beavan Rake said that in tropical countries maggots in the nose and in the external auditory meatus were very common in persons in very different stations in life, but more particularly in lepers.

Hunter Mackenzie.

Morison, Alexander (London).—*Improved Tonsil Guillotine.* "Brit. Med. Journ.," Jan. 16, 1892.

A MODIFICATION of Mackenzie's guillotine, in which the handle is placed farther forwards, and the knife made longer. "The result of this is, that the main arc of manual motion is from the thumb towards the rest of the hand, and not *vice versa*, and the distal end of the instrument moves towards, not away from the tonsil." The fenestra is oblong, and the edge of the knife is concave. It is made by Messrs. Arnold and Sons.

Hunter Mackenzie.

Owen, Edmund (London).—*Fatal Case of Unrecognized Cervical Caries.* "Brit. Med. Journ.," Jan. 16, 1892; West London Med. Chir. Soc., Jan. 8, 1892.

A REPORT of the case of a servant girl, with cervical caries and post-pharyngeal abscess. She had pains in every branch of the superficial cervical plexus and along the great occipital nerve. The post-pharyngeal abscess was evacuated, but the pains persisted, and she lay constantly with her hands up to her head. Necropsy showed that the transverse atlo-axoid ligament had given way, and that the odontoid process was pressing against the upper end of the cord. Mr. Owen remarked on the too frequent mistaking of the "neuralgiæ" of central spinal disease for "rheumatism."

Hunter Mackenzie.

Annandale, T. (Edinburgh).—*Cicatricial Stricture of the Lower Part of the Œsophagus.* "Edinburgh Med. Journ.," May, 1890.

THE author thinks highly of the use of Leyden's sound in such cases.

Hunter Mackenzie.

Newman, David (Glasgow).—*Stricture of the Œsophagus.* "Lancet," Jan. 2, 9, 16, 23 and 30, and Feb. 13 and 20, 1892.

THE situation of the disease in the Œsophagus determines the character

of the symptoms. Thus, in malignant disease high up opposite the cricoid cartilage (about eight inches from the teeth) the development of the dysphagia is very rapid. As the part of the tube involved is the least distensible, the muscles of mastication are interfered with, so that the food does not reach the portion in which the circular fibres come into play, there is apt to be regurgitation into the mouth and larynx, and œdema or obstruction of the latter is readily produced. When the growth is at the level of the bifurcation of the trachea (about thirteen inches from the teeth) the supervention of the dysphagia is more gradual. An obstruction in this position may be due to aortic aneurism, which must be carefully excluded, especially by the absence of paralysis of the left vocal cord. In cases of malignant stricture close to the cardiac orifice the dysphagia comes on late, and the œsophagus may hold a considerable amount of food, which wells up soon after it has been swallowed. Pain in swallowing is only usual when the disease is high up.

Benign tumours are very rare. Cicatricial stricture, with its history of traumatism, is illustrated by some typical cases. In a case of dysphagia from the formation of a gumma marked difficulty in swallowing had developed in five months, there was no hæmorrhage, and, except during deglutition, no pain. An obstruction was detected by means of a bougie, and a swelling could be felt from outside behind the larynx. On enquiry, a history of primary infection twenty-six years previously was elicited, and recovery took place under anti-syphilitic treatment.

Spasmodic stricture is doubted by Dr. Newman to exist in an otherwise healthy œsophagus. In a well-marked case chloroform was administered, and the electric œsophagoscope revealed the presence of an inflamed patch.

The bougies used by Dr. Newman are of gum elastic, uniform in size from end to end, and oval on section. The writer points out that the œsophagus may be of normal calibre up to the stricture, and that the real difficulty may be to find the orifice. [No mention is made of the use of *coudé* instruments, nor of the simultaneous introduction of several bougies.—ED.]

Among palliative measures in cancerous stricture is the avoidance of gluten-holding bread, and the substitution of cakes made of Indian corn-flour, 1 lb., powdered white sugar, $\frac{1}{2}$ lb., white of six eggs, and flavouring to taste. When swallowing becomes impossible, a feeding tube is used. When there is a superposed spasmodic element, small doses of cocaine before meals may give relief, or a tube may be passed during chloroform anæsthesia. Favourable mention is made of the short funnel-shaped tubes introduced by Symonds. In cicatricial stricture, dilatation is, of course, recommended, but it has to be continued. In two cases dilatation with a tupelo tent was beneficial. Electrolysis gave disappointing results. Newman discards internal œsophagotomy, is not in favour of œsophagectomy, and considers that circumstances favourable for œsophagectomy are hardly ever found. Gastrostomy is recommended "as soon as the patient is unable to take sufficient food by the mouth in those cases where it is inadvisable or impossible to feed him by tubes."

Dundas Grant.

Hume, G. H. (Newcastle-on-Tyne).—*Gastrostomy for Stricture of the Œsophagus.*
 "Brit. Med. Journ.," Jan. 2, 1892; Northumberland and Durham Med. Soc.,
 Dec. 10, 1891.

EXHIBITION of a girl, aged five and a half years, on whom, three years previously, gastrostomy had been performed for stricture of the œsophagus following the swallowing of liq. potassæ. Dilatation had been tried, but without success. At times, a little fluid could be swallowed.

Hunter Mackenzie.

LARYNX, &c.

Onodi (Budapest).—*Experimental Researches on Paralysis of the Larynx, IV.*
 "Monats. für Ohrenheilk.," 1891, No. 7.

THE author concludes: The motor innervating nerve of the direct muscles of the vocal bands is the nervus recurrens. There is no double innervation. The accessorius spinalis has no relation to the motor innervation of the larynx. The isolated nervous fibres of the postici lose their former vitality, like those of the constrictors—a confirmation of the Rosenbach-Semon theory.

Michael.

Suckling, C. W. (Birmingham).—*Bulbar Paralysis, with Bilateral Paralysis of the Abductors of the Vocal Cords.* "Brit. Med. Journ.," Jan. 9, 1892;
 "Midland Med. Journ.," Dec. 9, 1891.

THE patient was a man, aged forty-three. The vocal cords were adducted, and, on inspiration, were drawn close together, causing stridor; on expiration, they were slightly separated, the edges vibrating. The patient died soon after the performance of tracheotomy.

Hunter Mackenzie.

Linkenhold (Wiesbaden).—*Nervous Laryngeal Cough in a Boy Eleven Years of Age.* "Monats. für Ohrenheilk.," 1891, No. 10.

A CASE of very intense and obstinate hysterical cough. Cured by sudden application of cold water.

Michael.

Stewart, Donald (Nottingham).—*Laryngeal Papilloma.* "Brit. Med. Journ.," Jan. 2, 1892; Nottingham Med. Chir. Soc., Dec. 16, 1891.

EXHIBITION of specimen removed by endo-laryngeal means.

Hunter Mackenzie.

Richards, G. A.—*Abscess of the Larynx.* "Internat. Journ. of the Med. Sciences," May, 1890.

A SUMMARY of twenty-six personally observed cases. The author believes infectious diseases and frequent colds to be the most common causes.

Hunter Mackenzie.

Wolf, Julius.—*Total Extirpation of the Larynx for Cancer.* Berliner Medizinische Gesellschaft. Meeting, Jan. 13, 1892.

DR. WOLF reports a case of laryngeal cancer, in which he extirpated the whole larynx. The patient was cured, and now speaks through an artificial larynx.

Michael.

Wallace, D. (Edinburgh).—*Two Cases of Laryngectomy.* "Edinburgh Med. Journ.," Oct., 1890.

IN the first case a complete laryngectomy was performed by Mr. Chiene, and, in addition, the upper portion of the gullet was removed. The patient died thirteen days after the operation. In the second case (which had been correctly diagnosed by the abstractor fifteen months before operation) a partial laryngectomy was carried out by the same surgeon. The patient was alive eighteen months after the operation. Malignant disease was present in both cases. *Hunter Mackenzie.*

Clegg, W. T. (Liverpool).—*Tracheotomy in an Infant four days old.* "Brit. Med. Journ.," Jan. 9, 1892.

THE operation was performed on account of the presence of a large nœvoid mass beneath the tongue, and the existence of swelling of the nasal mucous membrane, which together obstructed the respiration. The child died two days afterwards. *Hunter Mackenzie.*

Wagner.—*A Case of Thyrotomy in a Child eighteen months old.* "New York Med. Journ.," Dec. 5, 1891.

THE patient was suffering from obstruction to the respiration evidently laryngeal and not thoracic. Tracheotomy was performed, and two weeks later the thyroid cartilage was opened, when a papilloma about the size of a small pea was found on the left vocal cord posteriorly. This was removed and the child made a very good recovery. Owing to the illness of the author the tracheotomy tube was not removed for eleven months, at the end of which time the patient died of influenza. During this period the child breathed perfectly well through the mouth and nose, and was evidently in excellent health. *John Macintyre.*

THE EAR.

Lichtenberg, K. (Buda-Pesth). — *On Disturbances of Hearing in Railway Servants with reference to the Safety of the Travelling Public.* "Monats. für Ohrenheilk.," 1891, Nos. 11 and 12.

LICHTENBERG has officially recommended the circulation of the points established by Moos, as follows :—

1. Locomotive drivers and stokers suffer sooner or later from affection of the organs of hearing, with marked diminution of hearing power, and usually on both sides, while pursuing their calling.

2. This acquired dulness of hearing appears to be more dangerous in regard to signals than does colour-blindness. The latter is congenital, and can be detected before the individual is employed, but the former is slow and insidious in its onset, and its occurrence may only be recognized accidentally, as when, for example, through cold or injury, the hearing on one or both sides becomes feebler or abolished.

3. As the striking evidence shows that the ears of railway servants engaged on the trains are very frequently diseased, further investigation may perhaps correct this result, but the fact is positive and unquestionable.

4. Before engagement the hearing ought to be investigated with the greatest care, and only by a medical man thoroughly practised in otology, as the tests, especially the functional ones, are difficult and complicated, and because the customary use of the watch and voice is quite insufficient.

5. That those employed should be instructed that a diminution of their hearing capacity is liable to come on in the course of their pursuit, and that they must report the slightest sign of its approach.

6. That an examination of the hearing organs of railway drivers, etc., appears to be necessary, at least every two years, for the prevention of accidents.

Dundas Grant.

Sune y Molist.—*Artificial Drum made of Collodion.* "Revista de Laringologia,"

&c., Aug., 1891, and "Bolletino delle Malat. dell'Orrechio," &c., Jan., 1892.

THIS only differs from the well-known artificial membrane of Michael in the omission of the water which this otologist instils before the collodion. Dr. Sune y Molist considers the collodion alone sufficient. [We cannot but think that those who have practised the use of the cotton-wool drum of Yearsley will be loth to relinquish it for collodion if they try both, as we have done.]

Dundas Grant.

Milligan (Manchester).—*Meningitis following Chronic Suppurative Middle Ear Disease.* "Brit. Med. Journ.," Jan. 2, 1892; Manchester Path. Soc., Dec. 9th, 1891.

EXHIBITION of specimen, taken from a boy, aged seven, in whom the mastoid antrum had been opened, thick cheesy pus evacuated, and diseased bone scraped away. Death occurred ten hours after the operation. Necropsy showed the base of the brain floating on pus, which had entered the cranial cavity along the sheath of the auditory nerve.

Hunter Mackenzie.

Cousins, J. Ward (Portsmouth).—*Improved Method of Examining the Auditory Canal and Membrana Tympani.* "Brit. Med. Journ.," Jan. 16, 1892.

THE author describes and illustrates a method of examining the ear by means of a speculum, with mirror and lens attached, and a special form of head-rest. They are made by Messrs. Maw, Son, and Thompson, of London.

Hunter Mackenzie.

Booth, J. Mackenzie (Aberdeen).—*Mastoid Abscess.* "Brit. Med. Journ.," Jan. 16, 1892; Aberdeen, &c. Branch, Brit. Med. Assoc., Nov. 18, 1891.

EXHIBITION of a girl, aged ten years, whose mastoid antrum had been opened with a chisel for abscess. The symptoms were immediately relieved, and the patient was well in ten days.

Hunter Mackenzie.

Milligan, Wm. (Manchester).—*The Treatment of "Attic" Suppuration by Excision of the Membrana Tympani and Auditory Ossicles.* "Lancet," Jan. 16, 1892.

MILLIGAN describes the anatomical relations of the "attic," which is no doubt well-known to our readers to be the portion of the tympanic cavity

above the level of the short process of the malleus, containing the head of the malleus and body of the incus. Retention of secretion, and the frequent association of disease of the ossicles and mastoid antrum, render suppuration in this region persistent and obstinate. He thinks the frequency of the condition has been under-estimated, and that it is present "in three and a half per cent. of the cases" [of what?—ear disease in general, or suppurative median otitis? We assume the latter.]

In opposition to Walb, who considers that suppuration in the "attic" is usually due to extension or infection from the external meatus through the very doubtful foramen of Rivini, he believes (rightly, we think) that the cause is usually general inflammation of the tympanum, and that the "attic" spaces are then shut off by inflammatory adhesions with the natural results. Out of twelve cases, Milligan found it secondary to scarlet fever in six, to naso-pharyngeal catarrh in two, and without assignable cause in four.

Caries of the ossicles and parietes is common, and may only be detectable by careful exploration with a fine probe. The importance of thorough treatment is evident when we remember the proximity of the "attic" to the cranial cavity, the mastoid antrum, and the lateral sinus.

The indications for the operation are: (1) chronic suppuration with caries of the ossicles, and (2) the presence of cholesteatoma in the drum cavity. Carious spots must be scraped and free drainage must be established.

The operation is performed under illumination from the forehead light or mirror. A general anæsthetic is needed. For antiseptic purposes the ear is previously irrigated with warm carbolic or boracic lotion several times daily, the auricle is cleansed with turpentine or ether and covered with a carbolized towel. To minimize hæmorrhage, a twenty per cent. solution of cocaine is kept in the external meatus for five minutes before the operation. If the membrane is intact (which is rare), a circular incision is made 1-16th of an inch from the periphery. The tendon of the tensor tympani is then cut close to its insertion into the malleus. The superior ligament of the malleus is then divided. [This is easier in the diseased than in the normal condition of parts.—ED.] Milligan next divides the malleo-incudal ligaments by means of a curved knife. The malleus thus freed is removed by means of forceps or snare. If the incus is to be removed it must now be drawn down by means of a hook and its attachment to the stapes severed. [It is said that the chorda tympani—if in such cases it is likely to have any functional value—is more likely to escape injury if the incus be removed before them all.—ED.] The ear is lastly irrigated with warm boracic lotion, carefully dried, insufflated with finely pulverized iodoform and lightly packed with iodoform wool. The dressings are changed when they get moist.

Four cases are described in which benefit, as regards both hearing and suppuration, followed excision of the malleus alone after other methods of treatment had been unavailing. [This paper will be read with interest in connection with abstracts of papers by Kuhn, Schmiegelow, and Bezold, in the *Journal* for January. It may not be out of place to remind our readers that the chief clinical characters of these cases are

prolonged otorrhœa and the presence of a *perforation in Shrapnell's membrane*, out of which there usually grows a *polypus*.]

Dundas Grant.

Charazac, J. (Toulouse).—*Contribution to the Study of Malignant Tumours of the Ear*. "Revue de Laryngol., d'Otol., etc.," Jan. 1 and 15, and Feb. 1, 1892.

THE *auricle and external meatus* may be the seat of epithelioma, of sarcoma or of carcinoma. *Epithelioma* may follow an injury or a simple cutaneous affection (eczema, impetigo, etc.), or may arise without any known cause. It generally originates in the skin of the upper portion of the auricle. Soon there is a sensation of heat and discomfort, ulceration appears, and with it a variable amount of pain. The ulcer bleeds readily, discharges a more or less abundant ichor, is usually irregular with "punched-out" edges, the floor being red or violet and smooth, or more often covered with granulations. In some cases it takes a vegetating form, and there are warty excrescences separated by irregular furrows. Sooner or later, the peri-auricular glands are enlarged. [It will be noted that a resemblance to lupus, rodent ulcer, syphilitic ulcer or papilloma may render diagnosis difficult.—*Reporter*.] *Sarcoma* appears as a tumour which may be of the size of a small nut. It may have the softness of a lipoma, the firmness of a fibroma, or the vascularity of an angioma. Later, it ulcerates and fungates. Its favourite seat is the lobule. *Carcinoma* appears generally as a pimple which rapidly attains a considerable degree of development. The auricle has been seen to be converted into an ulcerated mass of the size of a fist.

The *middle ear* may be attacked primarily or secondarily from the external ear or the parotid, the tongue, the superior maxilla (of the last, Dr. Charazac narrates an interesting case in which hæmorrhage and obstruction to the passage of the Eustachian catheter led him to employ digital exploration and posterior rhinoscopy, and to diagnose malignant disease of the maxilla). More rarely, extension from the dura mater to the ear may take place. In a typical case of epithelioma of the middle ear, a patient, aged sixty-five, experienced discomfort in the right ear, followed soon by deafness, local pain, noises, etc., and otorrhœa. Shortly there appeared a polypoid granulation, whose removal failed to relieve the symptoms. Increased pain and facial paralysis next supervened, and the skin of the mastoid and occipital regions became œdematous and tender, without fluctuation. The symptoms might all have arisen from middle ear suppuration, and accordingly the mastoid was opened. The cavity was filled with granulations; there was much dark blood, but no pus. The microscopical examination of the "fungosities" revealed characteristic lobulated pavement *epithelioma*. The patient died six months after the exploration. It is difficult to decide as to whether the earlier middle ear symptoms depend on an established malignant disease, or whether they are merely those of a simple median otitis which creates a *locus minoris resistentiæ*, a starting-point for the evolution of neoplastic growths in subjects predisposed to it. The pain, the offensive discharge, the facial paralysis, the vegetations, the tendency to bleed occurring in patients over forty years of age, should awaken suspicion as to the malignant nature of

the otitis. *Sarcoma* occurred in a child of twelve years of age under Dr. Charazac's care. Two and a half years previously an acute suppurative inflammation occurred and a small granulation formed on the promontory. This was removed, and, under treatment, complete recovery appeared to take place. In April, 1891, there came on severe pain, facial paralysis, and polypous excrescence, with extreme general feebleness. The removal of the excrescence gave some relief, but the palsy continued. The otorrhœa persisted, and was at times tinged with blood. The outgrowth recurred in the tympanum and attained the size of a large pea. It was removed twenty days before the publication of the report, and was found to consist wholly of a round-celled sarcomatous tissue. So far, this was an exception to the generality of cases of malignant disease of the middle ear; as a rule, there is extension in various directions. Towards the mastoid there results local pain and swelling, with ulceration, fungation, and fœtid ichorous discharge, without necessarily any evidence of feverishness. In other cases the disease extends inwards to the internal ear and brain, or forwards to the temporal fossa, where it may simulate a temporal abscess. Again, it may affect other neighbouring organs, such as the naso-pharynx, producing permanent dysphagia. Intermittent dysphagia, on the other hand, is observed when the glosso-pharyngeal nerve is involved. The other bulbar nerves may also be affected with the natural symptoms. In general it may be stated that "when, in a patient "past middle age, there occur, in the course of old or recent otorrhœa, "violent local pain, accompanied by fœtid discharge, with the production "of fungosities which readily bleed and recur rapidly after removal, we "ought to suspect malignant neoplasia. The probability becomes greater "if there supervene facial paralysis and inflammation in the mastoid "region or temporal fossa. The microscopical examination of the vegetations is the only thing which can make the diagnosis certain." The prognosis is absolutely fatal, and the treatment only palliative. Relief may be afforded by the removal of vegetations, the incision and curettage of the mastoid, and above all by the unstinted use of morphia.

Malignant disease of the *labyrinth* is practically unknown, except as secondary to disease of the outer or middle ear (usually epithelioma or carcinoma) or of the cranial contents (more frequently sarcoma). Tumours of the *auditory nerve* are generally fibro-sarcomata, producing deafness and the usual symptoms of intra-cranial tumours. Numerous cases have been reported.

The appended bibliography of malignant diseases of the organs of hearing is so valuable that a debt of gratitude is due to Dr. Chazarac for his well directed labour in compiling it.

Dundas Grant.

Polo (Nantes).—*Trephining the Cranium and the Mastoid Process in a case of Suppurative Otitis.* "Revue de Laryngol.," &c., Jan. 15, 1892.

AN acute suppurative otitis followed an attack of measles in a boy of six years of age. There came on without interval an extreme degree of local and general headache, with evening pyrexia and great constitutional disturbance. The patient was pale, and there were noted dilatation of pupils, not contracting to light, slow hard pulse, diminished consciousness,

scarcely any response to questions, bilious vomiting, sluggishness of bowels, internal strabismus of the left eye. On account of the slight elevation of temperature, the localization of the cephalalgia, and the greater frequency of cerebral abscess than of meningitis, a diagnosis of abscess was made. The mastoid was opened, only a drop of pus was found, and the lateral sinus was exposed. Next day there was little change, and the cranium was trephined over the temporo-sphenoidal lobe. The dura mater bulged, and was incised. After exploring forwards and backwards in several directions, the operator hit upon a small collection of pus by means of an aspirating needle, driven straight in for about four centimètres. This was followed by the escape of what appeared to be cerebro-spinal fluid from the lateral ventricle. The opening in the cerebrum was enlarged and drained. The patient slept, the pulse improved, the left eye squinted outwards instead of inwards. Death occurred next night. [It is to be regretted that there is no account of a *post-mortem* examination, by which the diagnosis of this not very clear case might have been more definitely confirmed.] *Dundas Grant.*

Botey, Ricardo (Barcelona).—*Treatment of Otitis Media Acuta.* "Revista de Ciencias Médicas," Oct. 10, 1891, "Archivos Internac. de Rinol., Laring., Otolog.," Jan., 1892.

DR. BOTEY advises a vigorous antiseptic treatment, thus :—During the first forty-eight hours instillations every two hours of one to two per mille solution of the bichloride of mercury in glycerine, aural injections of solutions of half per mille in salt water, and nasal douche and gargles of one in ten thousand, combined with tartaric acid and chloride of sodium. If the pain lasts more than thirty-six hours he performs myringotomy, and inflates the tympanum by Politzer's method in children, and catheterization in adults. He advises Wilde's incision to be promptly practised if the mastoid is affected. [In addition to the well-known antiphlogistic and derivative measures employed the reporter would recommend to his readers the instillation of cocaine one per cent., and resorcin two per cent., for fifteen minutes at a time, the drops being moderately warmed.]

Dundas Grant.

Dench, E. B. (New York).—*Chronic Non-Suppurative Inflammation of the Middle Ear.* "New York Med. Journ.," Sept. 26, 1891.

To arrive at data on which to ground the prognosis in this disease, Dench analysed a number of cases (forty-one) *in which there was a reasonable doubt as to what the result of treatment would be*, testing the relation of "bone" to "air"-conduction in each by means of five tuning-forks from C, having 128 vibrations per second, to C iv. having 2048. He was thus guided by an application of Rinne's experiment. It was of course requisite to determine how great a diminution of air conduction was necessary in order to render the "positive" or "negative" result of Rinne's experiment of diagnostic value, and he accepted Lucae's standard, viz., understanding of whispered speech at not more than one metre (say forty inches).

Dench therefore tested systematically, by means of the five tuning-forks, those cases in which the whispering distance after inflation did not

remain at a considerable distance above forty inches, as well as some doubtful cases in which the whispering distance was over forty inches. He excluded six cases as due to disease of the perceptive apparatus, to injury or to senile change (presbykuisis). Of the thirty-eight remaining, twenty-eight were improved, six were practically cured, three were unimproved, and one was apparently made worse.

The *cured* cases were mostly young patients; the bone-conduction for the first three forks was better than the air-conduction (negative Rinne); while, we presume, for the two highest the air-conduction was the better (positive Rinne). In one case only—a boy of fourteen—in which whispering distance was under forty inches, air-conduction was throughout better than bone-conduction, resembling a case of disease of the perceptive apparatus, but inflation doubled the hearing-distance, and after a few weeks' treatment perfect restoration resulted.

In only twenty-four out of the twenty-eight *improved* cases was a complete record made. Bone-conduction was greater than air-conduction in eighteen, and less in six, the whispering distance in the latter being over forty inches, except in one case aged seventy-four. In four of the improved cases in which whispering distance was over forty inches, bone-conduction was relatively greater for the first two or three forks, air-conduction for the others.

Of the three *unimproved* cases, in one the general health was at fault. In the other two the whispering distance was under two feet, and bone-conduction for the first four forks exceeded air-conduction.

What cases, then, may be hopefully treated? Those, generally speaking, in which the whispering distance is over four feet and in which the preponderance of air-conduction over bone-conduction for at least the highest tuning-fork is preserved, especially in comparatively young patients and of not very long standing (the last point often quite undeterminable, and therefore often negligible).

As regards *treatment* the ordinary lines were followed. Dench thinks that prolonged and rather powerful inflation is of importance when there is evidence of firm adhesions, and when the membrane is not atrophied to an extent to endanger rupture from this procedure. He did not find Lucae's spring probe of any great value. Eustachian bougies were useful when obvious narrowing of the tube did not soon pass off. In one case he found tenotomy of the tensor relieve tinnitus to a considerable extent. Hygienic treatment among the poor patients treated was little available, and treatment of the throat and nose was of course carried out, but the cases with which this paper is most particularly concerned are precisely those in which the nose and throat are not palpably at fault. The prognosis is favourable in proportion to the degree to which the deafness depends on naso-pharyngeal trouble, with a history of increased impairment of hearing due to a cold or an exacerbation of a concomitant catarrhal trouble. In some instances he found improvement follow massage of the ossicles by means of some form of ear-trumpet or conversation-tube, such as Dr. Maloney's "otophone" ("Archives of Otology," 1887, p. 177). As an inexpensive substitute he recommends an india-rubber tube about two feet in length, into one end of which is slipped the tube of an

ordinary kitchen funnel. The free end is inserted into the meatus, while the patient is read to for ten or fifteen minutes twice daily. In a few cases he gave small doses of pilocarpin by the mouth, and he thought that improvement was afterwards more marked. Intra-tympanic operation, (such as the division of the incudo-stapedial articulation) is safe if under proper precautions, and should be recommended when a prolonged course of treatment produces no improvement of hearing, and the tinnitus remains distressing. No case, he thinks, should be pronounced beyond hope until we have tried the various means at command and continued treatment for some time—say at least four or six weeks—and then persisted for months if there is the least sign of improvement. *Dundas Grant.*

ASSOCIATION MEETINGS.

THE SOCIETY OF LARYNGOLOGY, OTOLOGY, AND RHINOLOGY, OF PARIS.

Meeting, November 6, 1891.

The Treatment of Tracheitis by Hot Inhalations of Menthol. By Drs. ALFRED MARTIN and LUBET-BARBON.

Though used by Rosenberg in the form of inhalations and intra-tracheal injections in oily solution, hot inhalations have not been sufficiently employed, although the drug is thus introduced into the air-passages without intermixture with any vehicle. For more than two years we have found it of excellent service in tracheitis, especially in cases where the patient suffers habitual irritation of the larynx and trachea, and where the pressure upon the latter is painful and provokes attacks of coughing. These attacks occur spontaneously, and are preceded by a kind of tickling, so that the patient can pretty accurately localize the seat in the laryngo-tracheal region. These tracheites are generally very persistent, and are reproduced by the slightest atmospheric variations. This is the weak point of some patients who appear to be "habitual coughers," and have simultaneously a rhino-pharyngitis. Laryngoscopically, the cords are seen to be slightly reddened, especially at the free edges; mucus is adherent in the inter-arytenoid region and subglottic region, which latter is often slightly swollen; the trachea is red, and exudation products can be seen along its walls. Inhalations of menthol are facilitated by the fact of the solid body being fused about 38°, and volatilized about 45°. The apparatus employed is of the simplest kind, consisting practically of a wide-necked flask, closed by a cork with two holes, through each of which passes a glass tube—one short, intended simply to carry air into the receiver; the other longer, and ending in a caoutchouc tube for insertion into the patient's mouth. The receiver is heated in a water bath, or by an alcohol flame, and white vapours of menthol soon fill the receiver, and can be drawn by inspiration along the caoutchouc tube. The first inhalations should be slowly taken, and the menthol should not be too highly heated, in order to avoid cough and suffocation. Two or three inhalations of about ten inspirations a time can be thus made during the day, employing a temperature so much the higher according as the disorder is more or less intense or rebellious.

The Canal of Jacobson, and the possibility of recognizing it during life, and its probable rôle in the pathogenesis of certain lesions of the Nasal Septum. By Dr. POTIQUET.

This canal in the human subject represents vestiges of the organ of that name, an organ which attains its greatest development in certain mammals. In the sheep, for instance, it consists of a muco-membranous tube enclosing some branches of the olfactory nerve, and the tube is itself included in a cartilaginous covering, applied on each side of the nasal septum. In man the organ is only rudimentary, the cartilaginous covering being reduced to thin tongues or small portions of cartilage, known as the cartilages of Jacobson, or accessory cartilages of Sappey, which fold on each side the base of the quadrilateral cartilage and point of the vomer, and the muco-membranous tube is represented only by a canal, or *cul-de-sac*, of small extent, above these cartilages, and situated towards the inferior portion of the cartilaginous septum.

Described in man and figured by Fr. Ruysch,¹ then by S. Th. Soemmering, in his magnificent plates on the anatomy of the olfactory organ,² this little canal has been, since the discovery of the organ of Jacobson in mammals³ (1811) described in man by J. W. Meckel,⁴ and studied in the human embryo by Dursy.⁵ In 1877, A. Koelliker made the organ of Jacobson in man the subject of a monograph,⁶ and since then this little canal has been studied in the works or articles of Th. Koelliker,⁷ Schwalbe,⁸ Loewe,⁹ Quain,¹⁰ Zuckerkandl,¹¹ &c. It has not, so far as I know, been described in any French work. Neither Gratiolet,¹² nor Ch. Remy,¹³ describe it in man.

Its existence in man is constant, says Soemmering. We cannot be so affirmative, at least so far as it concerns the adult or the aged. In some recent dissections (May, 1891) of eleven heads of adults or aged persons, of comparative freshness, it is true that we have found it eighteen times.¹⁴ It is comparatively easy to find the orifice on the cadaver. When carefully washed, exposed to open daylight, placed in front, or inclined, the eye can scrutinize all the inequalities of surface, and by use of a probe in the region indicated a pretty large crypt can be discovered, which is no other than the canal sought for. In the head of the newborn infant of a few months old it is always found, often at the end of a little furrow which leads to it. It has appeared to us that in adults there was more chance of discovering it the younger the subject was. This is no doubt caused by the chronic lesions of the mucous membrane depending upon repeated coryzas, which probably with age lead to its obliteration.

I.

On the living subject it is a little different. Moldenhauer is, so far as we know, the only rhinologist who has endeavoured to recognize it, but his efforts were in

1. "Thesaurus anatomicus," Tome III., 1703.

2. "Abbildungen d. Mensch. Organe des Geruches," 1809.

3. "Annales du Muséum d'Histoire naturelle," Tome XVIII., Rapport de Cuvier.

4. "Handbuch der Mensch. Anatomie," Tome IV., 1820, Cité par A. Koelliker.

5. "Zur entwicklungsgeschichte des Kopfes des Menschen, etc.," 1869.

6. "Ueber die Jacobodischen Organe des Menschen, etc.," 1877.

7. "Ueber das os intermaxillare des Menschen," 1882.

8. "Lehrbuch der Anatomie der Sinnesorgane," 1887.

9. "Monatsschrift für Ohrenheilkunde, 1886," et Congrès Internat. de Berlin, 1890.

10. Quain's "Elements of Anatomy," 9th edition, 1882.

11. "Real-Encyclopædia der gesammten Heilkunde," 2te ed., 1888, Art. Nasenhöhle.

12. "Reserches sur l'organe de Jacobson," Thèse de Paris, 1845.

13. "La membrane muqueuse des fosses nasales," Thèse d'agrégation, 1878.

¹⁴ We must thank M. Poirier, "Chef du travaux Anatomiques de la Faculté," for assistance in these researches.

vain. "Although my attention had many times been directed to this point," says he, in speaking of the orifice of Jacobson's canal, "I have not been able to see it in the living subject."¹⁵ He describes it as surrounded by a cushion, it is true; but if, in the adolescent and the adult, we believe the anatomical specimens which we have had presented to our eyes, and what we have seen in the adult, and if we trust the figures of the septum in which it is found represented (Soemmering, A. Koelliker, Schwalbe, Merkel¹⁶), this orifice presents itself rather

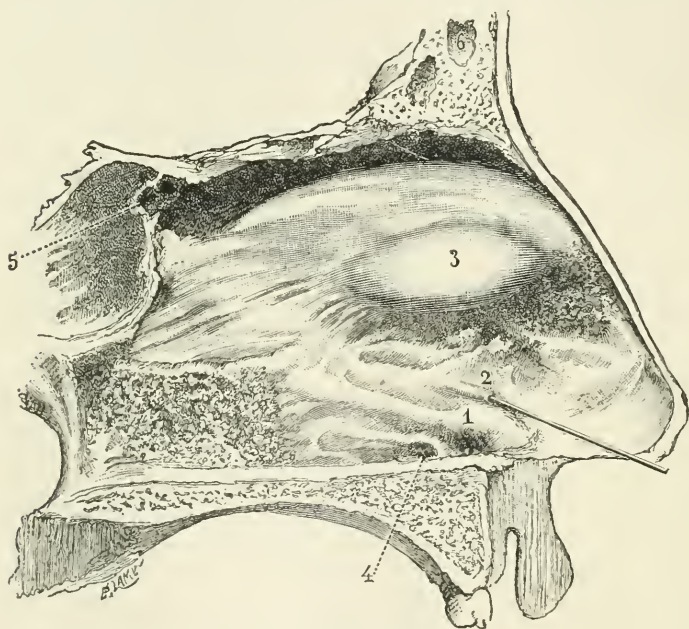


FIG. 1.—The Nasal Septum.*

1. Cushion partly constituted by Jacobson's cartilage.
2. Orifice of the canal of Jacobson with a probe introduced.
3. Tubercle of the septum.
4. Naso-palatine infundibulum.
5. Orifice of the sphenoidal sinus.
6. Frontal sinus.

as limited by a valve; the cushion seems only to exist in the young infant (see the figure in Ruysch's work), and if Moldenhauer was not able to discover it in the living subject, this is rather due to the error of seeking for a cushion as the distinctive point.

It is not, however, impossible to find the orifice of this little canal, which oftenest would scarcely deserve the name of *cul-de-sac* by reason of its small extent in the living subject. It is certainly less easy to find it than upon the cadaver, but with a little care, and sometimes with much patience, it can be found. It is necessary to know where to look for it. It is situated above the cushion running from

¹⁵ "Maladies des fosses nasales" (Ouvrage traduit par nous), 1888, p. 13.

¹⁶ Figure copied from Merkel by Zuckerkandl, *loc. cit.*

* The septum here figured was chosen from a man about forty years of age. The little sub-septal piece of skin depending from the septum and part of the upper lip, which was absent in the specimen, have been replaced schematically. The distance of the orifice of Jacobson's canal from the angle of the membranous septum and the upper lip is less than the real distance.

before backwards, which, constituted in good part by the cartilages of Jacobson, occupies the anterior inferior portion of the septum (Fig. 1). From Koelliker's measurements, it is on the average situated 8.5 mm. from the floor of the nasal fossa, and 24 mm. from the angle formed by the membranous septum and the upper lip, and it is about 1 mm. in size. The length of the canal directed from before backwards and a little upwards may be about 9 mm. (Schwalbe), but it measures on the average only 4 mm. These are only average measurements, but the canal of Jacobson may open a little in front of or beyond these figures. A lozenge-shaped space may be circumscribed upon the septum (Fig. 2, *a, b, c, d*), measuring 7 mm. from above downwards, 8 mm. from front to back, in which is nearly always found the orifice, but Koelliker's measurements were only conducted on eighteen subjects.

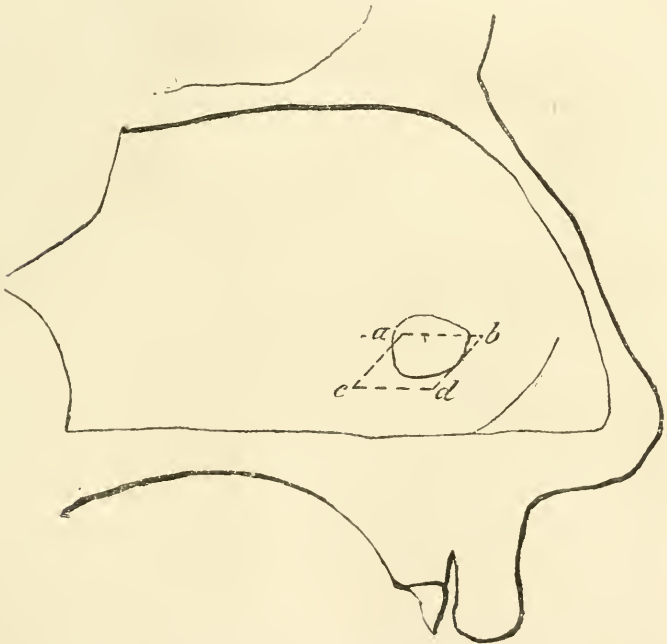


FIG. 2.—Diagram of a perforated Nasal Septum (? perforating ulcer) found in a subject aged about sixty.*

Our researches on the cadaver have taught us that the canal of Jacobson is pretty symmetrically placed right and left, on the same subject, equidistant above the floor of the nasal fossæ. But its length, and also the distance which separates its orifice from the nostrils, and its situation antero-posteriorly, are subject to variations on one side or the other. This equidistant position from the floor of the nasal fossæ on the right and left on the same subject is a circumstance which may greatly facilitate the discovery of the orifice on one side, when it has already been found on the other side, and from a pathological point of view it constitutes an important fact.

From the facility with which it is found in the cadaver, it is surprising how

* The lozenge figured *a, b, c, d*, approximately represents the space in which the orifice of the anal of Jacobson was found in eighteen subjects, according to the measurements of A. Koelliker.

difficult it is to recognize the orifice of the canal of Jacobson in the living subject, but in the latter the conditions of research are different and unfavourable.

For the clear perception of details, no illumination is equal to that of direct solar light. But in these climates we have to rely upon artificial light, which changes the colour of objects, and darkens their contours. Anterior rhinoscopy, too, as commonly practised, presents the septal mucous membrane in an oblique fashion instead of in a direct plane, as in the cadaver, and slight conditions leading to movements of the surface line of the orifice. The membrane is often covered also with desiccated layers of mucus, or masses of epithelial *débris*. The cartilaginous septum, especially in its inferior aspect, often also has an irregular configuration, and especially a slight vertical undulation at this spot, rendering exploration with the probe or naked eye difficult. Where possible, illumination should be effected with a plane reflector by solar light, but this can only exceptionally be done. The speculum should be used so that the zone sought should be as little oblique as possible. A cotton wad on a probe will rid the septum of mucus, but this should be done very gently. The experience and patience of the rhinoscopist will enable him to overcome the obstacles presented by irregularities of the septum. The narrowness of the orifice of the canal and the shortness of its course increase the difficulty of finding it, and, although the rhinoscopist must often pass the probe over this very region, its accidental entry into the canal is prevented by the fact of the probe commonly used being too large. Even in the most favourable cases the naked eye can scarcely more than suspect the orifice of the canal, which presents merely a spot a little darker than the rest, a slight depression, or a suddenly ending furrow, leading to the canal. For probe exploration, a very fine probe, about $\frac{1}{10}$ ths mm. in thickness, is lightly pushed into the supposed orifice, and if it penetrates from 3 to 4 mm. or more into the mucous membrane we may be sure of being in the canal of Jacobson. Its introduction is generally quite painless; its withdrawal may be followed by a little drop of blood. If the probe glides over the surface of the mucous membrane without penetrating it, and there is nothing in the neighbouring parts to attract attention, search must be made with the extremity of the probe from before backwards in the zone indicated previously (Fig. 2), or even a little outside of it, particularly above the Jacobsonian cushion.

If the narrowness of Jacobson's canal makes its research difficult, the shortness of its course, often only 2 mm. (A. Koelliker), may often leave in suspense the true significance of the cleft into which the probe enters. Morphologically, Jacobson's canal is after all only a crypt in the mucous membrane, but a crypt larger and deeper generally than those which are found in the mucous membrane of the portion of the septum subjacent to the *tuberculum septi*. Though comparatively easy to determine with the naked eye on the cadaver, it is not so easy to say whether the probe is entering the canal, or only a crypt. But although having in man no connection with Jacobson's cartilage, it is seen in the cadaver, and certain cases in the living subject, to be adjacent to the cushion which the cartilage helps to make at the base of the septum, or at a very little distance above it, at the region where vertically and transversely the membrane is of the greatest degree of thinness. The canal may be obliterated. From February to August, 1891, our experiments, made upon a little over two hundred subjects, have caused us to recognize the canal in one hundred cases, or about once in four or five investigations. Since Czermak, Voltolini, and Duplay, it cannot be denied that the pathology of the nasal cavities has been proportionate to the perfection of the methods of exploration. We are convinced that many lesions occupying the region of Jacobson's canal and the canal itself can now be recognized, which before would have been unrecognized. We have thus recognized a small, elongated

cicatrix at this point in a syphilitic subject who had been for long under examination, and which was seen only after our attention had been directed to this region. In syphilis especially one is struck with the frequency with which a perforation of the septum is found in evolution, and the extreme rarity with which ulcerative syphilides are observed at this point, of which the perforation is often only the consequence.

It is possible that repeated probings may lead to obliteration of the canal, but as it is not necessary to the organism this is not followed by any harmful consequences.

II.

Moldenhauer remarks, "The organ of Jacobson has of itself no pathological importance." Many reasons and some experiments made particularly at the Saint-Louis Hospital¹⁷ incline us to dissent from this statement.

It is a hardy assumption to make that because an organ exists only as a vestige it has no pathological importance. These organs, such as the ileo-cæcal appendix, do not offer the greatest resistance to morbid processes. The comparative frequency of appendicitis is well known. It is worthy of remark that the most important part of the septum, from a pathological point of view, and the part where is the greatest predilection for morbid processes, of whatever kind, is precisely that which shelters the canal of Jacobson. At that spot are situated the ulcerative syphilides described by Michelson, perforations due to the same cause, the perforating ulcer described by Weichselbaum, Voltolini, Hajek, etc.; that is the place of origin by preference of recurrent epistaxis, and at that spot do lupoid neoplasias occur with but little known frequency in the course of lupus of the face, and also the perforations to which they give rise—the nodules of leprosy, and the subsequent losses of substance, and the perforations which occur in the course of certain infectious diseases, *e.g.*, typhus and typhoid fever.

A glance at Fig. 2 is particularly instructive.

If on this septum—[perforated by an unknown process (perforating ulcer? or syphilis? which was found by us in the cadaver of a man, aged about sixty)]—we take the maximum and minimum distances noted by A. Koelliker, from the floor of the nasal fossa to the orifice of the canal of Jacobson, on the one hand, and from this same orifice to the angle formed by the membranous septum with the upper lip on the other hand, there will be obtained the lozenge traced in the figure, and which we have previously spoken of as "the zone of research." Is not the superposition of this zone and of the perforation of the highest interest, and of great suggestiveness?¹⁸

For this particular localization of morbid processes in a determinate region of the septum no explanation has yet been offered. It has been said that perforations of the septum owe their occurrence at this spot to the greater thinness of the cartilage. But this does not tell us why the initial lesion occurs at this spot in preference to any other. May not the canal of Jacobson have something to do with it? In considering the course of certain of these lesions, the spots where by preference they occur, their pathogenesis, and their manner of *début* on the septum, such a supposition appears to be very probable. Especially as regards the perforating ulcer, its site and form, and the site of the perforation which it may give rise to, and the symmetry on both sides of the septum noted in a case by

¹⁷ In the clinic of M. Hallopeau, at the suggestion of M. Lallier.

¹⁸ Ignoring the picture, we have taken a scheme of the entire piece by the aid of a compass. The examination of the fragment preserved, in which the perforation is seen immediately subjacent to the Jacobsonian cushion occupying the base of the septum, is more demonstrative than the scheme.

Hajek,¹⁹ does it not seem as if the canal of Jacobson could in some cases at any rate have something to do with it?

Hajek, bearing in mind the colossal number of cocci which the nasal cavities shelter even in the normal state, considers this ulcer to be a necrosing affection of the mucous membrane, due to penetration into the depth of the glands of the staphylococcus and streptococcus pyogenes. "The large excretory ducts of the "mucous glands are particularly exposed to the receipt of these noxious agents, "leading to a local irritation and inflammatory alterations of the epithelial lining "of the mucous glands and of their excretory ducts. The inflammatory products "which rest in the ducts, the coagulation of blood which may form after hæmorrhages, furnish a basis particularly favourable for the multiplication of bacteria "and their pathogenic action." If such is the pathogeny of the perforating ulcer, would not the rôle which Hajek attributes to the glands of the mucous membrane be equally applicable to the canal of Jacobson, which in man is no more than a *cul-de-sac* without function?²⁰

It is surprising that Hajek did not in his remarkable study attribute to the canal of Jacobson the smallest rôle in the causation of perforations, but the clinician is slow to take advantage of new facts furnished by anatomists, as exemplified in the case of perforating ulcer of the septum, which although clearly described by a pathological anatomist,—Weichselbaum—in 1882, and by Zuckerkandl, continued to be misunderstood clinically until Voltolini (1888), Rossbach (1889), and Hajek (1890) made a distinct nosological species of it. It is not to be concluded that every lesion of the inferior portion of the cartilaginous septum will invariably commence in the *cul-de-sac* in question, but this will simply furnish a condition particularly favourable to their development due to its configuration and perhaps to its being a retrograde organ. The process may, without any doubt, arise otherwise.²¹

We must suspect strongly that the organ of Jacobson does not escape the common law, and that, even though rudimentary, it may be affected primarily by certain morbid processes, and that its rôle in certain perforations of the cartilaginous septum is far from being insignificant. We have seen lupoid and syphilitic lesions limited precisely to the region which the canal of Jacobson commonly occupies, and even in two cases²² recalling the form in a striking manner; but we have not been able to see them from the commencement, *i.e.*, when the course of the canal

¹⁹ "Virchow's Archiv," Tome cxx., 1890.

²⁰ Another micro-organism, the gonococcus, is found to have a natural tendency to seek refuge in the crypts of the urethra, and to multiply there so as to lead to a series of modifications, a phlegmasia process, folliculitis. The site of this folliculitis is, according to Lefort (Thèse de Paris, 1888-1889), the valve of Guérin situated about one and a half centimetres from the meatus. If the pathogenesis of the perforating ulcer is what Hajek considers it to be, could not the cocci, so numerous in the nose, under certain circumstances produce a folliculitis of the canal of Jacobson, leading to necrosis of the subjacent cartilage? The analogy is striking.

²¹ 1. (July 8, 1891) A copper turner, aged twenty-six, syphilitic for three years, and tuberculous, had for eight days perceived a perforation of the septum. For six months he had been in the habit of removing adherent crusts from the nasal fossæ by the finger nail—sometimes causing slight bleeding. There was a perforation of the antero-inferior portion of the cartilaginous septum of the size of a lentil, cicatrized, except in its superior portion, and having thin edges, the mucous membrane covering this having a cicatricial aspect. On the left the canal of Jacobson was about 3 mm. in depth, and situated about 4 mm. behind the posterior edge of the perforation.

²² 2. *First Case.*—A man with tertiary syphilis; syphiloma of the upper pharynx; loss of a portion of the sphenoid; perforation of the palatine vault, etc. A small grey-white cicatrix existed in the left nasal fossæ about 4 mm. long and 2 mm. high, exactly above the cushion of Jacobson and in the spot where the canal is usually found.

Second Case.—Lupus of the nose and upper lip, extending into the vestibule of the nasal fossæ. Red, bleeding granulations in the region of the canal of Jacobson, the probe passing through the whole septum. Cauterizations with nitrate of silver. In June the granulations disappeared, and the perforation presented cicatrized edges, being situated above the cushion of Jacobson, 4 or 5 mm. long, and 2 mm. high, and occupying exactly the site of the canal of Jacobson.

was yet recognizable, and this latter condition ought to be fulfilled before one can affirm the existence of a new nosological entity, "Jacobsonitis." Resuming :—

(1) The canal of Jacobson may be, if not always, at least often recognized in the living subject :

(2) Its research has an important place in exploration of the nasal cavities ;

(3) The relation which may exist between the canal of Jacobson and lesions occupying the region where it is situated require research.

Meeting, Dec. 4, 1891.

On a little known Variety of Phlegmonous Angina (Lingual Phlegmonous Perio-Amygdalitis ; Superficial Submucous Phlegmon of the Base of the Tongue).

By Dr. ALBERT RUAAULT.

In a monograph presented to the Clinical Society of Paris in 1888, in which I related some original observations of patients with hypertrophy of the lingual tonsil, I referred to the possibility of acute inflammation of this region, relating such a case. Though chronic hypertrophy was well known, acute inflammation had been but little studied. Seifert had recorded one case, but it was not one of spontaneous angina, but had proceeded from penetration of a foreign body (fragment of wood) into the mucous membrane of the base of the tongue. Literature published up to now only indicates the possibility of acute or sub-acute lingual amygdalitis. I have seen a number of such cases in both sexes, and especially in women in whom frequent recurrences had determined a little hypertrophy of the adenoid tissue of this region. It is rare that in the latter case the affection gives rise to accentuated general symptoms. It is often very circumscribed, situated only on one side of the base of the tongue, on some follicles, and seen laryngoscopically only as a lively red tint with marked tumefaction, which disappears at the end of three or four days. Sometimes, however, the inflammation involves all the lingual tonsil, which is seen to be tumefied, very red, dotted with pultaceous deposits, and may give rise to a little redness and tumefaction (not œdematous) of the epiglottis, and of the chain of lateral lymphatic follicles of the inferior part of the anterior pillars of the palatine arch. It may be accompanied with fever and gastro-intestinal disturbance. The pain of deglutition is acute, and spontaneous pains exist, radiating from the median region of the neck towards the ears and downwards to the mediastinum. Patients most of the time complain of a painful point in front of the neck ; often at the level of the sternal fourchette, quite below the seat of the lesion. From my personal experience these events are far from being rare, and if they are not more frequently observed in laryngological practice, it is that they are almost invariably misunderstood outside of this specialty. The physician who is not a specialist refers the symptoms to the slight signs of inflammation which he observes on the posterior wall of the pharynx, and especially to the inferior portion of the anterior pillars, and he diagnoses an "inferior pharyngeal angina" without bearing in mind the apparent disproportion between the supposed lesions and the symptoms observed. As the affection is cured in a few days ordinarily, either spontaneously or under simple treatment, its true situation, as revealed by the mirror, escapes the observer.

In some cases severer symptoms, even alarming, may appear, and the laryngoscopic examination is undertaken only because of the apparent imminence of suffocation, when the surgeon is called in. He finds a more or less extensive induration of one side of the floor of the mouth, and sees with the laryngoscope an ill-defined tumefaction of the base of the tongue, even œdema of the epiglottis, and reserves his prognosis, remaining in doubt between the diagnosis of deep basic glossitis (the

lingual angina of David Craigie) and pre-laryngeal phlegmon, and a similar condition of the floor of the mouth. Generally, some days later the patient is better, suffocation has not occurred, and whether the patient may or may not have expectorated pus remains doubtful to the surgeon; he imagines that there has been the threatening or even the commencement of one or other of the affections he has thought of, and in the presence of cure, does not occupy himself much with forming a retrospective diagnosis which no longer presents interest. It would be difficult also for him, for the symptomatology special to each of these affections is but vaguely indicated by authors. They are differentiated quite from an anatomical point of view, but clinically one is limited to signaling the possible gravity of the prognosis, and to speaking of the possibility of enormous cedemas of the anterior part of the tongue, of respiratory complication, gangrenes, etc; without directing attention to that which in these various symptoms belongs more especially to basic intra-muscular glossitis, or to pre-laryngeal phlegmon, a variety depending on the affection of the floor of the mouth, of which it may be considered to be a circumscribed phlegmon, sometimes abortive (anterior epiglottic angina of Michel), sometimes suppurative, as opposed to diffuse gangrenous phlegmon of the same region (Ludwig's angina). I believe that in the cases to which I have made allusion we have to do with neither one nor the other of these affections. These latter affections, happily rare, do not retrograde so easily when they have appeared, and even when they have had this happy termination, they can be diagnosed early with some precision. But, generally, their abortive forms are confused with the affection to which this note is meant to call attention, *lingual phlegmonous periamygdalitis, submucous superficial ulcers of the base of the tongue*.

I have in five cases already in my practice observed this affection; it always has occurred with such marked individuality as to deserve a description which, although summary, seems to me to mark a distinct clinical type. My observations have been on four men and one woman; once the affection occupied the whole region of the lingual tonsil, without marked difference on either side; in the other cases, it was situated three times on the right side and once on the left. In the first case the affection ended in resolution, but there was a recurrence, and there was spontaneous evacuation of an abscess. In the other cases, I have twice seen supuration terminate the disorder, and twice it has ended in resolution. The cases are as follows:—

Case I.: Dr. N., aged about thirty, suffered from chronic pharyngitis, left from a severe attack of diphtheria two years previously. A few days before being seen, the patient had been attacked with severe pains in the throat radiating to both ears, with extreme dysphagia, slight febrile condition and marked excitement. The throat was very red, the voice normal, and respiration easy. Some months before the same conditions were present, and had yielded partially at the end of six to eight days, and completely two days later after the spontaneous intra-buccal evacuation of a certain quantity of pus. M. Vidal referred the patient to me, thinking that on this occasion there was a deep abscess, and the patient also wished me to make a laryngoscopic examination and to treat this condition. Examination was easy, though the patient was unable to protrude the tongue without pain. Along with the diffused redness of the throat the inflammation was seen to be very marked about the anterior pillars of the fauces. The lingual tonsil was very large and tumefied, extremely red and shiny, and it was raised up on a base larger than itself. The epiglottis was a little red, dull, but not cedematous; the larynx was nearly normal. The anterior surface of the tongue was very furred, soft, free from pain, and without any trace of swelling. The affected region was very sensitive to touch, and, placing the finger in the centre of

the posterior limit of the floor of the mouth on the skin of the neck, pain was also produced. There was no swelling of glands. I made some parallel antero-posterior and very deep scarifications with a laryngeal knife. Pain was acute, and there was a free flow of blood. After-treatment consisted of repeated garglings with carbolic solution, 1—100. Next day there was relief, and cure was complete a few days after.

Case II. : Madame X., twenty-nine years of age, married, and subject to sore throats and laryngitis for a long time. Six days previously she had been attacked with malaise, shivering, and fever, followed by severe pain in the throat and right ear. Dysphagia was very marked, each attempt at swallowing causing pain in the throat and ear. The voice was good and respiration normal. There was no great difficulty in opening the mouth or protruding the tongue. In the pharynx there was nothing abnormal, except a little redness of the lower part of the right anterior faucial pillar. Tongue clean, soft, and not painful on pressure. Very considerable tumefaction of the base of the tongue was seen on the right side, with effacement of the glosso-epiglottic fossette, and of the glosso-epiglottic and pharyngo-epiglottic folds of the same side ; with very considerable œdema of the epiglottis, which was distorted on the left side. The lingual tonsil was thickened, red, covered in parts with pultaceous deposits and raised on its right half by the subjacent tumefaction. Pressure by the finger was painful, especially at one spot. A little pain was produced by pressure on the right side of the neck, on the level of the posterior part of the floor of the mouth. There were no enlarged glands. Very hot poultices were ordered to be applied to the right side under the jaw, during the day, and at night inunction with mercury and belladonna ointment, the parts to be wrapped in cotton wool. A wash of carbolic acid, 1—100, and quinine internally were prescribed ; a warm injection to relieve the constipation and intestinal antiseptics by doses of naphthol, 2·50 grammes in five doses ; rest and a diet of milk and eggs. Next day there was relief and absence of fever. At one point over the lingual tumefaction fluctuation could be felt, but, nervous at the sight of the knife, the patient refused to have it incised.

Two days later the patient expectorated a quantity of pus of disagreeable taste and odour, and experienced relief, with disappearance of pain. Tumefaction disappeared, but pus could be seen to exude from a spot half a centimètre or more in length situated at the anterior extremity of the right glosso-epiglottic fossette. A small laryngeal probe was easily introduced into the orifice, but it scarcely penetrated laterally—a little pus, however, exuding. Carbolic gargles were continued, but the patient ceased to attend longer.

Case III. : A lawyer, aged forty-six, after a chill, with malaise, nausea, and headache, suffered acute pain in the throat and right ear, dysphagia and fever lasting six to seven days. All these painful symptoms became much intensified, and were accompanied with salivation, not being able to swallow on account of the pain. On the seventh day the fever fell, but the voice becoming hoarse, and respiration a little difficult, the patient consulted the author. The tongue was protruded without difficulty. A little catarrh of the pharynx and redness of the anterior faucial pillar (which was slightly swollen at the base) existed. The tongue, though furred, was not swollen or painful to pressure. A large swelling of the right side of the base of the tongue was seen with the laryngoscope ; the epiglottis was œdematous, and the posterior region of the larynx and the vocal cords were red and catarrhal. The same treatment was adopted as in the previous case. Though palpation of the swelling of the base of the tongue was painful, there was no fluctuation. On the fourteenth day the patient expectorated a little pus, giving great relief. All the symptoms ameliorated. A little blood and sero-

purulent fluid was seen with the mirror to be exuding from the interstices of the two masses of follicles, behind and on the right, at the anterior limit of the glosso-epiglottic fossette. On the sixteenth day there was no more than a slight tumefaction of the right part of the lingual tonsil. Returning to his occupation, there was recurrence, with high fever for two days, and on the fourth day spontaneous evacuation of the abscess, with considerable relief. Pus was seen to issue from a spot at the anterior extremity of the right glosso-epiglottic fossette. A laryngeal bistoury was therefore introduced, and the opening enlarged. Phenol gargles were ordered, and three days before reporting the case the patient was nearly well, with a slight tumefaction of the right lingual tonsil, but no pain.

Cases IV. and V.: Both were men, aged respectively thirty-five and forty. In both the affection was treated early by the methods previously described, and in both resolution commenced at the fourth or fifth day, and the disorder ended from the seventh to the ninth day. There were neither vocal nor respiratory troubles, and there was no cedema of the epiglottis, but the local symptoms were the same as in the preceding cases.

Case VI. (communicated to the author by Dr. Cartaz): M. N., aged forty, consulted me in 1890, for a chronic pharyngitis, which had lasted several years. He smoked and drank freely, was rheumatic, and the previous autumn had a slight attack of gout.

Constant tickling at the base of the tongue troubled him, and produced attacks of coughing. Great hypertrophy of the adenoid tissue of the base of the tongue was seen by the laryngoscope (forming three large lobes in front of the epiglottis). Several cauterizations of the parts were made, the later ones being with the galvano-cautery. After a night at a ball, where he attained to *un doux état d'ébriété!* and subsequent driving in the open air, he experienced pain in the throat and slight fever, which led to his taking to his bed. The "angina" became worse for forty-eight hours, and towards the sixth day he experienced pain on swallowing, the pain radiating to the ears, and difficulty of breathing. On the seventh day, the author found diffuse redness of the pharynx and tonsils, and red tumefaction over the lingual tonsil and a swelling the size of a nut, pressing against the epiglottis (explaining the cause of the respiratory difficulty). A sense of fluctuation was felt. The patient declined to have it opened with a bistoury, and corrosive sublimate and phenol gargles were prescribed along with an emetic to relieve the gastric trouble which was present. Whilst vomiting, the patient ejected some pus and blood, after which he felt relieved. The next day the tumour had diminished, and there was no trace of opening or fistula, but it was evidently an abscess by infection of a wound treated in a fashion as fantastic as unmedical. The patient afterwards experienced great relief in his throat symptoms.

In reviewing these six cases, the following may be regarded as a fair sketch of the affection: onset often sudden, malaise, headache, sometimes nausea, shivering, smart fever, lasting four to seven days, anorexia, thirst, often constipation, pains in the throat from the first, then shooting pains into one or both ears, very marked dysphagia, voice ordinarily unaffected, hoarse once in five cases, and dyspnoea twice in six cases. There is no swelling of the neck, and no enlargement of glands.

The floor of the mouth is posteriorly a little affected, but the parts are soft; the patient can open the mouth, and depressing the tongue is not painful; the free part of the tongue is normal, it can be protruded easily, and traction can be made upon it slightly, to facilitate laryngoscopic examination; the pharynx is sometimes diffusely reddened, especially the lower part of the anterior faucial pillars; the lingual tonsil is very red, swollen, and raised on its base, forming a sort of

tumour, pressing against the epiglottis; the glosso and pharyngo-epiglottic folds may disappear. When the affection proceeds to suppuration the anterior surface of the epiglottis becomes œdematous, but this does not extend to the ary-epiglottic folds. When dyspnoea occurs it is only very slight, and is due to the falling backwards of the epiglottis: the voice remains unaffected, except when there is some laryngeal catarrh present; the abscess opens spontaneously from the eighth to the fourteenth day, and from two to five days after its appearance; the quantity of pus evacuated is only small; the fever diminishes when the abscess forms, and disappears when it is evacuated; the otalgia then disappears, and cure is effected in two or three days. The abscess may recur in one or two weeks, and the fever may reappear, but it does not last long, and spontaneous evacuation occurs early.

The seat of the abscess can be accurately defined; the layer of lymphatic follicles in the mucous membrane of the base of the tongue is inseparable from the subjacent layer, formed of a mass of glands, of which most rest on the superior lingual muscle, while others, situated deeper, are embedded in the muscle itself. The orifices of these glands open either in the intervals between the follicles, or in the centre of the mass; it is, therefore, by the help of these external ducts of the intra-muscular glands that the mucosa adheres to the submucosa in the region near the raphé formed by the median glosso-epiglottic ligament. A little outside, and in front of this region, the deep glands become less and less abundant, and the superior lingual muscle adheres to the mucosa.

If, then, the deep interstitial inflammation of the mucous layer, of which the upper portion forms the lingual tonsil, ends in suppuration, pus can only collect with trouble, and over an area of about one and a half centimètres, sharply limited to the median part of the median glosso-epiglottic ligament, and scarcely extending laterally beyond the level of the lateral glosso-epiglottic fold, and not reaching the calyciform papillæ in front. The pus would be limited below by the hyo-epiglottic membrane which, thick and resistant, would prevent it reaching the anterior surface of the epiglottis in the thyro-hyo-epiglottic space, in front of the larynx. The abscess is lateral, and if it is not bilateral (an event which I have not seen), it is because it can only extend from one side to the other of the median glosso-epiglottic fold, through a dehiscence in the fibres of this ligament. Œdema will be apparent in the glosso-epiglottic fossette and on the epiglottis, where the mucous membrane, being thin, will be transparent, while laterally, where it is thicker, it will appear only as a tumefaction. The tongue will remain normal. But if the abscess were intra-muscular, fluctuation would not be felt so easily, all authors being agreed upon the special hardness of such abscesses, which have been mistaken (Blaudin) for solid tumours, and there would not be spontaneous evacuation of pus in front of the epiglottis. Lastly, the tongue can be projected from the mouth and maintained without difficulty; the elevation of the tongue and drawing forward of the epiglottis resulting, do not provoke extreme pain, the reverse of what is the case when the inflammation is situated below the hyo-epiglottic membrane in the thyro-hyo-epiglottic space. A patient with pre-laryngeal abscess or Ludwig's angina is from the first unable to protrude the tongue or to bear laryngoscopic examination; he can only imperfectly open the mouth, from the pain occasioned, due to the tumefaction and hardness of the floor of the mouth, never failing in such cases.

Phlegmonous lingual peri-amygdalitis may then be easily differentiated from deep basic glossitis, and from pre-laryngeal phlegmons of the floor of the mouth. The absence of cervical adenopathy will distinguish it from phlegmonous adenitis, and it could not be confused with abscess secondary to a bone lesion.

Its prognosis, irrespective of the possible complications, which, however, have not been seen, is very favourable, since spontaneous opening of the abscess always occurs, without producing dangerous respiratory symptoms. Its seat, symptoms, progress, and termination allow us to consider it as a variety of common phlegmonous peri-amygdalitis.

As to treatment, deep scarifications from the first may succeed in preventing suppuration, but the fourth and fifth cases show that retrocession may occur without surgical intervention. An abscess once formed, and fluctuation perceived, opening ought at once to be performed, but spontaneous evacuation is sure to occur. Recurrence will be avoided if care be taken after spontaneous evacuation to enlarge the opening with the laryngeal knife.

LUC remarked that he had lately seen such a case.

LOEWENBERG made some remarks upon the necessity of obtaining antiseptics in diseases of the buccal cavity, for which purpose he endeavours to reach the microbes present in isolated spots, *e.g.*, an inflamed tonsil, by rubbing them first with 1—1000 sublimate and then with boracic acid applied with some force. The ideal will be obtained by treating the surface with a preparation of collodion which will hold these antiseptic substances and prevent the penetration of air holding microbes to the surface.

HERMES remarked that swabbing with corrosive sublimate did not seem to be devoid of danger.

GOUGUENHEIM asked why bacteriological examination was not made.

RUALT remarked that in these cases it was not probably the microbes of the mouth that had anything to do with them, for the affection is developed at the end of a veritable contagion; why did not the patient, for example, have a simple amygdalitis?

MEETING of the OTOLOGICAL SECTION of the Sixty-fourth Gathering of the ASSOCIATION of GERMAN NATURALISTS and PHYSICIANS.
(*"Monats. für Ohrenheilk."*, Nov., 1891).

(Continued.)

September 24th, 1891, Prof. WALE presiding.

Dr. KRETSCHMANN (Magdeburg).—*A Case operated on by the Author's Modification of Stacke's Method.*

Patient shown.

Prof. SCHWARTZE (Halle).—*Cholesteatoma.*

Cases of lasting healing brought about by the maintenance of a persistent opening in the mastoid process—cessation of suppuration.

Privat-docent SIEBENMANN. — *Demonstration of Casts and Dried Preparations.*

The specimens (temporal bone or half-head) freshly removed from the body are placed in Muller's fluid, or weak chromic acid solution, and their

holes and corners are thoroughly syringed with the liquid, and well washed out. They are then treated with diluted alcohol, gradually strengthened up to absolute alcohol, and lastly with turpentine, which, in case of large preparations, has to be changed at least once. The whole affair may take from a few weeks to several months. The preparations thus saturated with turpentine are placed in a light place, protected from dust, and before mounting may be cut or sawn through as required. Delicate pieces require decalcification and embedding in celloidin in the usual way.

The preparations shown were :—(1) Vault of pharynx, with palate, base of tongue and larynx, of a new-born child ; (2) vault of pharynx and pharyngeal tonsil (hypertrophied) of a child ; (3 and 4) vault of pharynx and pharyngeal tonsil of an adult ; (5) section through antrum, tympanum, and Eustachian tube ; (6) section through the temporal bone (coloured) with carotid, jugular, and facial ; (7) axial section through the cochlea of a guinea-pig ; (8 and 9) horizontal and frontal sections through the nose of a new-born child ; (10) half-head (of an adult) with a widely opened sinus maxillaris ; (11) injection preparation of the nose and accessory cavities of an adult.

In the tenth preparation probes were pushed through from the maxillary antrum, the frontal and sphenoidal sinuses, into the nose, and showed that in this specimen it would have been impossible, in spite of the comparatively large size of the openings, to have sounded these cavities from the nose during life.

Dr. KRAKAUER (Berlin).—*A Case of Multiple Exostoses of the Cranium, with Unilateral Atrophy of the Face; Demonstration of the accompanying Aural Exostoses.*

This was a girl of twelve years of age, of scrofulous tendency, who had suffered intermittently from left-sided otorrhœa since her earliest childhood. She presented the following peculiarities :—(1) Near the lower margin of the left orbit a scar remaining from the operative removal of an exostosis ; (2) an exostosis on the left mental protuberance of the lower jaw ; (3) a larger exostosis on the right half of the frontal bone ; (4) an exostosis completely occluding the left external auditory meatus. In addition, there was atrophy of the left half of the face, involving not only the soft parts, but the bones. Air-conduction was abrogated, bone-conduction well preserved.

In order to remove this last exostosis the auricle and cartilaginous meatus were detached, and turned forwards, and it was then seen that there were two other exostoses sessile on the upper and posterior wall, extending from the beginning of the osseous meatus to the tympanic ring. The whole of the posterior wall was removed by means of a chisel. The external parts were replaced, and a thick drainage tube was introduced as far as the tympanic membrane, as is done in Stacke's operation. Primary union took place.

The chief interest lay in the combination of conditions such as has not been described in the literature of the subject. The chronic otorrhœa

favoured the formation of the exostosis, but could hardly be considered the direct cause. For this we have to fall back on the scrofulous taint, if we can look upon it as the result of a hereditary luetic condition, which Toynbee mentions as a cause of exostosis. The author thought the aural exostosis was merely an accidental expression of the same trophic disturbance as gave rise to the exostoses situated elsewhere. Exostoses are rare in early years, the youngest case on record being that of a girl aged four, observed by Field.

Dr. SZENES.—*On the Therapeutic Effects of some new Otiatric Remedies.*

Cocaine Hydrochlorate.—Szenes had already tried this remedy in fourteen cases of tinnitus, and he tried it again in other fourteen with equally negative result. A five per cent. solution, slightly warmed, was injected through the Eustachian tube by means of a vulcanite catheter. In many cases, after the injection, there could be seen a congestion of the upper segment of the membrane, especially in the neighbourhood of the short process, extending downwards on the manubrium, but disappearing completely before the next inspection. In spite of the greatest caution one or two drops, in most of the patients, ran down into the pharynx, and Szenes was quite prepared to believe that some of the unpleasant symptoms ascribed to cocaine-poisoning—retching and constriction in the throat—must be charged to the account of the cocaine drops acting locally in that region, particularly in the case of susceptible people. The other toxic symptoms, reeling gait, vertigo, faintness, might be regarded as the further stage of those already mentioned, or else as direct nervous effect. As an antitinnitic remedy cocaine must be placed among those which do not yet enable us to solve the mystery of noises in the head, and if these noises depend on pathological changes in the vessels, there are many other remedies to be tried before we are in possession of a real antitinnitic.

Brom-ethyl.—This vapour, recommended by Loewenberg for tinnitus, especially in sclerotic median otitis, was tried by Szenes in forty-two cases of various kinds—pronounced sclerosis, typical middle ear catarrh, cicatrices of the tympanic membrane, synechiæ in the drum, and normal drums with tinnitus. The vapour aspirated in the air-bag was introduced into the middle ear by the catheter or by Politzerization. The statements of patients as to the cold or warm feeling induced by the process varied very much from time to time, and varied during the same sitting, so that the diagnostic value claimed for the sensations by Loewenberg could not be confirmed. No certain therapeutic results were obtained and further experimentation is required.

Aristol.—Szenes again tried aristol as an antiseptic powder, as recommended, for external and median otitis, and with results which confirmed his previous opinion that the remedy did not possess the good qualities claimed for it by Rohrer. In this Szenes finds himself in agreement with Birkner's recent experiments.

Dermatol.—In eighteen cases he made use of dermatol: ten of chronic middle ear suppuration, two of acute otitis, three in which granu-

lations remained after the removal of polypi, and three of diffuse external otitis. He found it to have a certain action in diminishing secretion. It was also unirritating, devoid of smell, but was not suitable to all cases in which the insufflation of powders was indicated. He recommends further trial.

Dr. BRIEGER had made experiments with dermatol, but he considered that on account of its insolubility it was likely to lead to the formation of firm crusts, behind which the suppuration might continue.

Dr. SZENES would not overvalue the advantages of dermatol, and said its use should be carefully limited to cases in which powder treatment was appropriate, where retention was not likely to occur.

Dr. SZENES.—*Casuistic Communications.*

He brought forward accounts of three cases of *Acute Otitis Media* which had run an unusual course. In the first case there was acute suppuration of the left ear, and three days after complete recovery the symptoms of the same affection came on on the other side, but were checked before suppuration occurred. In the second case the same order of events took place, but suppuration was prevented; and also in the third, but with suppuration in both. Szenes compares this to the so-called "wandering" pneumonia, and would describe it as "otitis media acuta migrans." Bacteriological investigation of such cases is required before the term "otitis media migrans," in the strict sense, can be accepted, as it will be necessary to show that the same micro-organisms are present in the second as in the first ear affected.

Prof. HABERMANN asked whether the author was not inclined to believe that the migrating median otitis might be due to the transmission of pyogenic material from the naso-pharynx.

Dr. SZENES did not think so, as he had avoided using the air douche, and had used exclusively in these, as in all his cases of unilateral acute middle ear catarrh, the Eustachian catheter.

Dr. BRIEGER asked if he thought the infection of the second ear was hæmatogenous in origin.

Dr. SZENES replied that he only wished to state the fact, that without any further definite cause the second ear became affected after the complete recovery of the first. For a satisfactory explanation they would have to trust to further observations.

Prof. WALB.—*On the Use of Lucae's Spring Pressure Probe in Diseases of the Middle Ear.*

Prof. Walb had at first some mishaps, but more recently by a more energetic use of the probe he had produced good results. In a few cases the tinnitus, which had been severe, disappeared entirely; in others it diminished, while the hearing power improved. The proceeding had to be carried out daily—in a few cases twice a day—and at each sitting pressure was made from fifty to sixty, or even one hundred times. The patients, without exception, got accustomed to the manipulation quite quickly. No local reaction took place. At first the head had to be fixed, but later that ceased to be necessary. For any considerable result to be

produced it was needful to carry on the treatment for months. (A few cases were treated for nine months.) The important observation was made that it was not only in cases in which bone-conduction remained good, while air-conduction was diminished, but also in cases of much lowered bone-conduction, that improvement took place, the bone-conduction being again restored. From this Walb concludes that our current mode of defining the seat of the disease according to the preservation or loss of bone-conduction requires revision, and that certain morbid conditions of the conducting apparatus modify the bone-conduction very considerably.

Dr. KRAKAUER (Berlin) had used catheter and rarefacteur simultaneously in suitable cases, but without getting better results than with the rarefacteur alone.

Dr. JOEL (Gotha) had obtained improvement in tinnitus by the use of Delstanche's rarefacteur.

Dr. STIMMEL (Leipzig) found subjective noises diminished after the employment of Lucae's probe, but without change in the hearing power.

Dr. WEHMER (Berlin) had had a few good results out of many cases in which he had tried it.

Prof. SCHWARTZE (Halle) considered that if the mechanical element was the chief one, then Hommel's "tragus-pressure" should produce equally good results, and he asked "if anyone could report experience of it.

Dr. STIMMEL had used Hommel's method in many cases, but had got good results in only two.

Dr. JOEL asked, further, whether anyone had narrated results obtained by the use of Aschendorfs hearing-tube.

Prof. WALB had used it in one hundred cases without any beneficial effect. The mode of applying it to the ear was a bad one, and, further, the instrument was injurious through the resonance which took place in the ear.

Dr. KRAKAUER tried it in fifty cases without result.

Dr. BRIEGER (Breslau) had one patient for whom Aschendorf had himself prepared the instrument. There was benefit, but the high price of this hearing-tube placed it beyond the reach of many.

Dundas Grant.

REVIEW.

Politzer, Adam (Professor of Otology in the Imperial University of Vienna, etc.).

—"The Anatomical and Histological Dissection of the Human Ear in the Normal and Diseased Condition." Translated from the German by George Stone. London: Baillière, Tindall, and Cox, 1892.

THOUGH Professor Politzer's "Zergliederung des Menschlichen Ohres" may in the original be in the hands of many of our readers, there can be no doubt that to many more a translation of this wonderfully detailed

work must have been a much felt want. Starting with a description of the instruments required and of the methods of extracting the organs of hearing from the cadaver, the writer proceeds to give an account of the dissection of the macerated temporal bone in the new-born infant and in the adult. The relatively greater size of many of the minutæ in the former than the latter makes its study most instructive and valuable from a mere anatomical point of view, but in addition an acquaintance with such features as the annulus tympanicus and the petro-squamous and mastoideo-squamous sutures is obviously a clinical necessity. A study of the text and illustrations will greatly assist the acquisition of this knowledge, and make the examination of the bones themselves extremely easy. The sections of the adult temporal bone are not less valuable. The methodical dissection of the organs of hearing, for anatomical or pathological purposes, is fully set forth, commencing with the auricle and meatus. This portion of the work swarms with useful "wrinkles": for instance, the use of glycerine for preserving the cartilaginous meatus and auricle; and of a (1:2000) solution of chromic acid for facilitating the dissection of the muscles, whether extrinsic or intrinsic. The experiments recommended for performance before opening the osseous meatus—viz., auscultation and inspection of the membrane during inflation *per tubam*, inspection of the ossicles through the opened tegmen tympani, and of a drop of fluid in the perforated superior semicircular canal, during rarefaction and condensation of the air in the meatus, will be readily appreciated.

The mode of investigating pathological changes in the spaces behind Shrapnell's membrane and in the malleo-incudal niche, and their relation to antral disease, is well explained. Those who have had any difficulty in understanding the musculature of the Eustachian tubes (and who has not?) will find the matter well elucidated on pages 101 and 102. The levator palati is shown to lift up the internal portion of the cartilage, and thereby, while diminishing the vertical diameter of the orifice, to relax and widen the calibre of the tube in its continuity. The tensor dilates the tube by unrolling the hook formed by the small external portion of the cartilage. This, though firmly fixed to the internal pterygoid plate at its inmost extremity, is mobile in the greater portion of its length. Both muscles thus open the tube. The structure of the mastoid, and the varying anatomical relations of the antrum, are shown by means of sections.

The labyrinth affords, of course, the greatest scope for attacking difficulties, and very properly the description of the infant bone is introduced before that of the fully-developed one. The dissection of the adult osseous labyrinth is not a very inviting proceeding. To those, however, who wish to undertake it, the recommendation to use the dental engine will not be unwelcome. The making of topographical sections of the organ of hearing on decalcified temporal bones (page 156) is much more tempting, and all may easily supply themselves with the instructive sections recommended if the enthusiasm can be kept up till the process of decalcification in acid and rehardening in alcohol is complete. The former "occupies two to three," the latter "several" weeks. "Corrosion-casts" are not very difficult to make in wax and resin, and Politzer's

method of electro-plating them with copper seems very attractive. They may also be made in fusible metal (Bezold), in celloidin (Steinbrügge), and in paraffin (Barth). The various methods of decalcification, cutting, staining, and mounting, are fully described, and their merits discussed in the chapter on histological examination of the organ of hearing.

No anatomist, and no otologist, can afford to overlook this unique work, and every praise is due to Mr. Stone for having rendered it available to us in our own language. Here and there, as is unavoidable in a translation, the words are rendered into English rather than the sense. These instances are, however, few and insignificant, and we refrain from indulging the critic's usual privilege of enumerating *errata*, which are of little moment, except to the author in preparing his second edition. The book is in its "get-up" quite equal to its German original, and has the advantages over it of being already bound and slightly cheaper in price.

Dundas Grant.

Obituary.

PAUL OSCAR MICHELSON.

ONLY a few weeks ago I had to report the death of our young fellow specialist Krakauer, and again we have to regret the death of another colleague, who died suddenly in his forty-fifth year, of an occult cancerous ulcer of the bowels perforating the peritoneum, and producing within a few hours a fatal peritonitis. Although only for ten years a laryngologist (previously he had for thirteen years practised dermatology), he has given us a number of interesting papers on nasal syphilis, on tuberculosis of the mouth, on sensation of taste in the larynx, and on the relation between pachydermia and tuberculosis. In one of the recent numbers of this Journal we made mention of his last great work, "An Atlas of the Diseases of the Mouth and Pharynx," of which only the first part has as yet appeared. This excellent book, which certainly ought to be in the hands of every one of our readers, must needs assure him a grateful memory with all fellow specialists. But he worked not only as a man of science, but also as a teacher. He trained many young physicians in our science, and many good works have emanated from his policlinic and under his guidance. We may mention here Gerber, "Pharyngo-Nasal Syphilis and Nasal Catarrh"; Nugge, "Naso-Pharyngeal Polyps"; Schädé, "Hypertrophy of the Lingual Tonsil"; Bloch, "Empyema of the Antrum of Highmore"; Kersntnig, "Pachydermia"; Nolténus, Anterio-Laryngoscopic Mirror, and Application of Penghawar Wool.

In his social relations our late colleague was unassuming and affable. All who knew him must have entertained towards him feelings of esteem and friendship. R.I.P.

Michael.

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REMARKS ON CONGENITAL MALFORMATIONS
OF THE AUDITORY APPARATUS,
WITH A CASE.

By GEORGE HEATON, M.A., M.B. Oxon., F.R.C.S.,

Assistant Surgeon to the General Hospital, Birmingham; Surgeon to the Ear and Throat Department of the Hospital.

ARRESTS in development, or congenital malformations of the ear and face, are always of interest, throwing light as they do on the still obscure and imperfectly understood processes of development of these parts of the body.

Malformations of the ear itself may be classified according as they affect the external, middle, or internal ear.

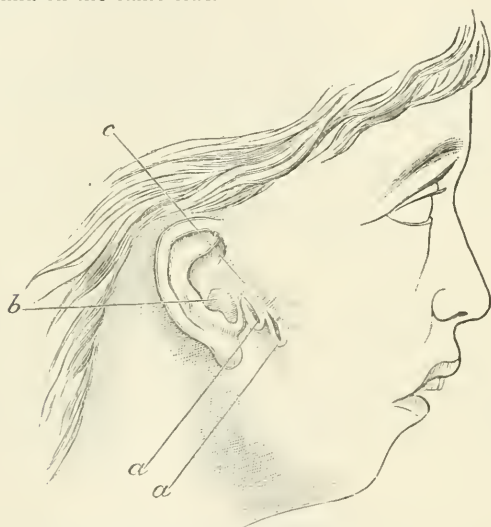
Complete absence of the auditory nerve and labyrinth has been recorded, and instances where parts of the internal ear—such as the aquæductus vestibuli, one of the semicircular canals—were wanting are known.

The middle ear in its turn may be congenitally absent, or its place occupied by solid bone. Amongst minor defects we have such deficiencies as absence of the promontory, absence of the canal for the tensor tympani muscle, of the Eustachian tube, of the fenestra ovalis, fenestra rotunda, or of the ossicles.

Deviations from the normal in the external auditory apparatus are commoner than the ones already mentioned, and some such deviation

from the normal is usually present where malformation of the deeper structures occurs. Amongst the many deformities of these parts which may occur may be mentioned a double external meatus, complete absence of the meatus, as in the case related below, absence of its bony or cartilaginous portion, malformations of the pinna and the so-called supernumerary auricles.

The case described below is an example of a one-sided absence of the external meatus, with but a partial development of the middle ear and inferior maxilla on the same side.



a. a. Stumps of supernumerary auricles.
b. Depression in place of external auditory meatus.
c. Depression in situation of temporo-maxillary articulation.

Case: L. P., aged fifteen, a quick, intelligent girl, came to the Ear and Throat Department of the General Hospital in December, 1891.

At birth two large "supernumerary auricles" were noticed in front of and below the right ear, and a smaller one in front of the left. These were all removed by the doctor who attended her mother. Her ear and the right side of her face have always been misshapen.

The right side of the lower half of the face is considerably smaller than the left. The mouth is drawn to the left, and the teeth of the lower jaw are situated behind and to the right of the corresponding ones in the upper jaw.

The lower jaw is well formed on the left side. On the right its body is natural, but the ramus, condyle, and coronoid process are all small and ill-developed. The masseter muscle is quite rudimentary, and the temporo-maxillary articulation, on the right side, so lax that the jaw can be displaced forwards or laterally for a considerable distance.

External ear, right side.—There are stumps of two supernumerary auricles in front of and below the pinna. The helix, anti-helix, and lobule

of the ear are normal. The external meatus is completely absent, a shallow depression, lined with normal skin, occupying its place.

No examination, to determine the presence or absence of a Eustachian tube on the right side, was permitted. The patient, however, on performing Valsalva's experiment, only feels a sensation of fullness in the ear on the normal side.

Hearing.—

Aerial conduction—

Tested with audiometer left ear, 14 feet right, 13 inches.
 „ tuning fork „ $\frac{*+}{-}$ 0" * — 15 seconds.

Perosseous hearing—

Fork on mastoid process..... left ear, $\frac{*+}{-}$ 0" * + 10 seconds.

pointing to absence of external and middle ear, but presence of an internal ear on the right side.

To explain these defects it is necessary to recall a few of the well-established facts known in connection with the development of these parts.

The middle ear and Eustachian tube are developed from the dorsal end of the first branchial or hyo-mandibular cleft, which has in front of it the mandibular and behind it the hyoid arch.

The cartilaginous bar in the first arch, or Meckel's cartilage as it is termed, has developed from it the malleus in its hinder extremity, the internal lateral ligament of the jaw, and those parts of the lower jaw which are developed from cartilage.

The second arch, or hyoid, gives origin to the incus, the styloid process, stylo-hyoid ligament, and the lesser horn of the hyoid bone.

The external meatus and pinna are developed around the posterior end of the hyo-mandibular cleft, by outgrowths from the general epiblastic covering of the head.

In the case described above there has been no attempt at the formation of an external meatus, either bony or cartilaginous, the ramus, condyle, and coronoid process of the inferior maxilla are all quite rudimentary, and the middle ear, if present at all, is but very imperfectly developed. There is, in fact, an arrest in development of all the parts which are formed from the mandibular arch and hyo-mandibular cleft. The presence or absence of a Eustachian tube I have not been able to determine, owing to the refusal of her parents to allow any examination.

The explanation of these defects, volunteered by the patient's mother, is that, when between three and four months pregnant with this child, she was struck violently in the abdomen with a basket. But this explanation, though a plausible one, fails from the fact that the arrest in development must have taken place considerably earlier in foetation than this, probably somewhere between the second and third months.

* + Denotes the time in seconds the tuning-fork was audible to patient after it had ceased to be so to a normal ear.

- Denotes the time in seconds the tuning-fork was audible to a normal ear after it had ceased to be so to patient.

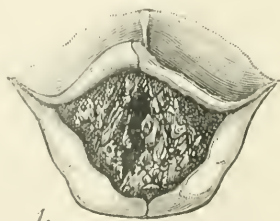
A CASE OF LATE HEREDITARY SYPHILIS OF THE NOSE, PHARYNX, AND LARYNX.

By DR. RICARDO BOTEY, of Barcelona.

I BELIEVE the publication of this case of late hereditary syphilis to be interesting for two reasons ; first, because it gave rise to some difficulties of diagnosis for a period of three years ; and, secondly, because of its rarity, if not for the syphilographer, at least for the rhino-laryngologist, and I believe that, in Spain at any rate, it is the first case of the kind which has hitherto been published.

Case : Andres Casas, fourteen years of age, apprenticed to a painter, suffered for three years and some months with his throat and nose. He is puny and thin for his age, not appearing to be more than ten or eleven years old. He first consulted me on the 13th October, 1891, with very marked dyspnœa. The voice was excessively raucous and nasal, and respiration was very short, breathing through the nose being impossible. In spite of this, deglutition was easy and painless. There was sub-orbital neuralgia and nasal blennorrhœa. He said that three years before, in consequence of diphtheria of the throat, this latter had troubled him, at which time the larynx, and later, the nasal fossæ had been affected.

Examination.—There was seen, ulceration and necrosis of the cartilaginous septum of the nose, necrosis of the floor of the nasal fossæ, with a sequestrum of the size of a small nut, and behind the second premolar destruction of the palatine vault with stellar cicatrices ; cicatrized ulceration of the epiglottis which was in part destroyed and deformed. The interior of the larynx was unrecognisable ; filled with condylomatous vegetations, principally about the glottis and the entry to the ventricles of Morgagni. The ventricular bands were irregularly hypertrophied as if they were in part formed of granulation tissue. The larynx formed a sort of funnel, at the bottom of which was seen an irregular space through which air passed with a whistling sound and without its being possible to distinguish the vocal cords, which had apparently disappeared, or were hidden from sight by the great hypertrophy of the mucous membrane (Fig. 1).



After a drawing by DR. R. BOTEY.

Cervical adenopathy of the submaxillary and lateral glands of the neck also existed, and they were hard to the touch and of the size

of small nuts. In spite of the difficulty of auscultation. I do not think there was anything abnormal in the heart or lungs.

Strongly suspecting syphilis, I interrogated the patient and his mother (who accompanied him) as to any previous morbid manifestations. The mother denied any syphilitic affection: she had nursed her child, and no one amongst her *entourage* had been affected with any venereal disease, and she herself had been quite free from such disorder. I, however, remarked that in questioning her she became suddenly red, and that she hesitated in her answers to some questions, besides being contradictory in some of her statements. I, however, pretended not to doubt her. Some days afterwards she told me that she had aborted twice, that her husband had a mistress, and that he frequented the company of prostitutes, and that he had had crusts on the hand and *taches* on the body two years before the birth of this child; moreover, that she had had an eruption on the body a year before her confinement, to which she attached no importance, and which resembled, as she expressed it, an abortive measles. A few weeks after this she lost much hair, and she had pains in the limbs, especially in the tibiæ, which pains were worse at night-time. I begged her to bring her husband one day. He came and I questioned him. He confessed that he had had syphilis, and that his physician (Dr. Sanchez) had treated his wife for this disease, and that he had communicated the disease to her, begging me also not to enlighten her as she was ignorant of the fact.

I was satisfied that syphilis in the parents was clearly established.

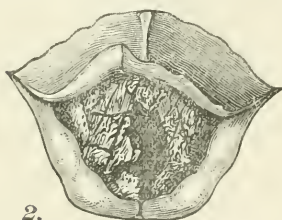
Dr. Alabert, the doctor of the family, informed me that this child was born at full term, but was weakly and thin, and he commenced to walk only at the age of sixteen months. His growth was slow, and he was more delicate and smaller than other children of that age. No manifestation of the diathesis occurred during the first few weeks of life. There was no keratitis and no disease of the ears, the only thing being a small exostosis on the left tibia at the age of seven. At ten, when at Reno, in the province of Tarragona, he had diphtheria; a few weeks after the voice became nasal, and he regurgitated food through the nose. His voice subsequently became so hoarse that he was completely aphonic. Nasal respiration became difficult, he had a discharge of pus, and eliminated two small fragments of bone when blowing the nose, but did not exhibit any other symptoms.

Respiration became gradually shorter and shorter, until distinct stridor appeared, due to stenosis of the larynx. He was then treated by various physicians, who diagnosed the disease as tuberculosis, scrofula, chronic laryngitis, etc.

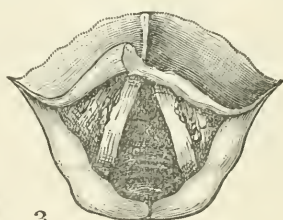
I made the patient undress, but I found only the small tibial exostosis. The teeth, however, were affected in a manner which deserves notice. There was no notching of the incisors (Hutchinson), but punctiform erosions on nearly all the teeth, which were without enamel. There was also slight atrophy of the crowns of the two lower first molars, and amorphism of the canines, which appeared like small incisors.

I instituted energetic anti-syphilitic treatment, and at the end of fifteen days the larynx had the appearance (depicted in Fig. 2)—*i.e.* the

lumen of the glottis had enlarged considerably, causing the stridor, which endangered life, to disappear, and permitting a view of a small portion of the left vocal cord (Fig. 2). The patient took three grammes of iodide of potassium a day, and had daily frictions of the armpits and thighs, with ten grammes of mercurial ointment. He was freely salivated, with enlargement of the tongue. Frictions were discontinued, and he then took only two grammes of iodide. As soon as the specific stomatitis disappeared I put him on to "Sirop de Gibert," and made endo-laryngeal applications of bichloride, one per cent. every other day. His condition improved greatly, his respiration became free, and the voice was no longer aphonic, but merely hoarse. I then removed a small sequestrum from the nasal septum, and that from the palatine vault, which came away



After a drawing by DR. R. BOTEY.



After a drawing by DR. R. BOTEY.

easily, with very little traction. In spite of this I believed that in the end I should have to eliminate the laryngeal condylomata, for I did not think they would disappear by this treatment alone, and I feared that ultimately, perhaps, the cicatricial retraction would lead to fibrous stenosis of the glottis, and I imagined would require Schroetter's tubes later on. But nothing of this kind occurred. Little by little the laryngeal vegetations disappeared, the epiglottic ulceration cicatrized completely. Respiration was fairly established through the nose, but a large oval perforation of the cartilaginous septum was left. The ventricular bands commenced to define their contours little by little, but were left somewhat irregular in form. And below this mass of granulations and newly-formed tissue appeared two vocal cords, perfectly smooth on their edges, but still a little red and swollen (Fig. 3). At the end of three months of energetic anti-specific treatment, accompanied with local applications of bichloride of mercury, the larynx of the patient appeared to be almost normal, leaving practically only the destruction of the fore-edge of the epiglottis on the left side (Fig. 3), and small irregular nodosities on the ventricular bands. Voice became normal and respiration absolutely free, the vocal cords later resumed their white pearly appearance, and the patient was then cured.

I have reproduced the pictures of the larynx in order to demonstrate the power of specific treatment in tertiary syphilis of this organ in children and adolescents. The result would certainly not have been the same in the adult, or even in many such cases, for we cannot deny that the most energetic specific treatment has very often only a feeble effect upon tertiary non-ulcerative syphilis of the larynx. This treatment undoubtedly cures, but there remains something of the local lesion, especially when it

is neo-formative, as in this case, which disappears only under treatment with cutting forceps, the galvano-cautery or Schroetter's bougie. Even in these cases we obtain only partial disappearance of the local lesion, for we remove only the portions of the newly-formed tissues which interfere with phonation or respiration, and cicatricial contraction requires dilatation of the orifice of the glottis, for it is well known that neither mercury nor iodide can have any action upon the new tissue, which causes the terrible syphilitic stenosis of the larynx and trachea.

Mauriac has rightly said,¹ "Neoplasia of tertiary laryngopathies, whatever their form, extent, and localization, are almost never spontaneously resolved. They end in destruction of the tissues by necrobiosis, or their transformation into fibrous tissue."... "Laryngeal stenosis is the consequence of these two processes. It varies between wide limits, but in all its degrees it compromises more or less completely the functions of respiration and at the same time that of the voice. If it is often arrested and ends not in extreme consequences it scarcely ever retrogrades, whatever one may do to cause its disappearance."

Consequently, in spite of the fact that there perhaps exists an *acute laryngo-stenosis*, by infiltration of the larynx, progressive narrowing of the larynx, by cicatrix or sclerosis of numerous laryngeal neoplasia, *i.e.*, *slow and definite* laryngo-stenosis, is not established. The new-formed tissue is reabsorbed, disappears and leaves scarcely any traces.

These lesions were, moreover, limited exclusively to the larynx; the trachea and bronchi were indemnified; at least, I could not observe any symptom pointing to their implication or even giving a suspicion of such.

The case was therefore one of tertiary laryngopathy, with equivocal appearances, benign, and with an insidious and quick course. In such a case the respiratory troubles are produced slowly, and increase only little by little, so that the patient's attention was only gradually drawn to these symptoms, like that of the doctors who attended him at first. It was only later on that they became grave, so that one of the physicians who treated him last proposed tracheotomy as the only means of averting death, which he advised must quickly occur.

And yet all, or nearly all, disappeared, as can be seen by comparing the first figure with the third, solely by anti-specific treatment.

This fact, the truth of which I cannot doubt, since I have had the patient under observation for four months, raises an objection to the general rule, which, as I have already said, is that tertiary syphilitic neoplasms of the larynx are always refractory to all treatment, *i.e.*, that their retrogression cannot be relied upon, in spite of the most energetic and prolonged treatment.

The age of the child (fourteen years) and the possibly very embryonic constitution of the laryngeal neo-formations were probably the two conditions which led to this brilliant and unexpected result, almost without any local intervention. The case is further notable from the fact that it is very rare to find associated grave pharyngo-nasal syphilis with laryngeal syphilis, and if it has been rightly said that syphilitic lesions of this part have a great tendency to descend, this is only true for the larynx.

¹ Charles Mauriac, "Syphilose du Larynx de la Trachée et des Bronches," Assetin et Houzeau, Paris, 1890, p. 6.

THE ELECTRIC LIGHT IN ANTRAL DISEASE (EMPYEMA).

By W. ROBERTSON, M.D., Surgeon Throat and Ear Hospital,
Newcastle-on-Tyne.

(Continued from page 111.)

I HAVE already so far discussed the use of the electric light that further detail seems unnecessary—sufficiently so, I imagine, to convince the most sceptical of its importance. In the first case, where the teeth were intact, it confirmed the diagnosis which, it may be asserted, could with equal certainty have been arrived at by other signs present. This fact, however, does not detract from the value of the measure, and the return to normal illumination in the same case after operation and subsequent treatment is pregnant with meaning. The gradual return of the tissues to normal transparency forms a ready means of gauging the process of repair going on in these, and from its use alone it becomes practicable to say exactly when treatment of the conditions referred to can be safely suspended, and that conversely it would be unsafe to allow an antrum to close so long as umbra or imperfect illumination remains.

It may, I think, now be taken for granted that the normal tissues in these regions in young and old are diaphanous, and that when these become infiltrated by pathological products (in the antral mucosa) the rays of light are not transmitted. In the case of antral disease (empyema infiltrated mucosa) the real cause of the umbra, is no doubt the immensely hypertrophic condition of the mucosa, and not the presence of discharge in the sinus; *e.g.*, in a case of hydrocele recently tapped I could make out transillumination and seat of testicle (with light), although the fluid subsequently withdrawn was quite milky. After all discharge has been cleared out of the sinus in these cases the umbra is still present as before.

In the above two cases cited for illustration the umbra was decided and unequivocal, while the other symptoms were equally diagnostic. There is, however, a class of cases met with where the umbra is not so pronounced, and where perhaps, encumbered with orthodox opinion, one might be almost inclined to doubt the merit of its use. Some of these occurred among patients suffering from recurrent polypi; the others presented all the symptoms of ozæna.

As regards recurrent polypi, in the majority of those I have treated during the last year imperfect transillumination has always been met with. Later on, when I come to speak of treatment, I shall give details of cases. Suffice it here to say that acting on the hints given by the light, and perforating the antrum, and subsequently maintaining free ventilation and drainage through it, I have met with results altogether novel to such cases treated in the usual way, *viz.*, cessation of inveterate tendency to recurrence of polypi, resolution of mucosa to normal conditions, along with disappearance of all concomitant complications, etc.

Other evidences of antral implication in these cases of recurrent

polypi than those afforded by the light may not be present, and pus may not be found on puncturing the antrum. The mucosa will, however, generally be found implicated either by cellular infiltration or, again, in a condition of polypoid degeneration. Ablation of a middle turbinate in such a case is certainly not attacking the *fons et origo mali*. As in middle ear disease (polypi granulation, cholesteatomata, etc.), so here the proceeding will be to perforate the antrum and maintain thorough ventilation and drainage through it until all evidences of disease present in it and the nasal fossæ are non-existent.

As regards ozæna, I shall report *in extenso* two cases bearing on the questions on hand :—

Miss Jane S., costumier, aged thirty-eight, was sent to me by Dr. Thomas Oliver as a case of ozæna two years ago, and presented all the characteristics of the disease, which had been in existence for two years. Each nostril was large and roomy, the middle and inferior turbinates being extremely atrophied, almost to the vanishing point. There were no points of ulceration and the septum was intact. Large crusts were present of the usual colour and odour. These were often got rid of, the size of a finger. Five or six pocket-handkerchiefs was the daily number required. When she was at school she remembered to have been troubled as well from the smell as the discharge. Since then the disease had been the bane and worry of her life, and, when I saw her first, I considered her case the worst I had seen of atrophic rhinitis. Her eyes, besides, troubled her and she is also a sufferer from anæmia and acne. Until lately I treated her after approved methods, viz., chlorate of potash, douches, Gottstein's plugs, galvano-cautery, etc., with the usual result, *i.e.*, modification of the symptoms, but not a cure of the disease. Some time ago I used the light and was somewhat startled to find a characteristic umbra on the right side and one less decisive on the left. After many trials I managed to dislodge some foul discharge *per viam naturalem* from the right antrum, but failed in the case of the left. Now, on neither side at any time was there the characteristic drop of pus to guide one as to the condition present. The patient's consent was readily given to operation, and with Dr. Oliver's co-operation, I opened both the antra anteriorly, the left first. This was done cautiously so as to avoid hæmorrhage and to secure an undisturbed view of its interior.

With the aid of the electric search-light the posterior region of the cavity was found lined with a thick layer of white curdy pus. A half inch thick cushion of deeply injected mucosa lined its inner wall, while the soft parts of the floor were not so much altered, but still abnormal. (I may say here that up to two years ago Miss S.'s teeth were sound throughout, since then the upper teeth—molars and canines—have disappeared.) The cavity was unusually large and not entirely filled up, as is the condition in most of these cases. The natural ostium was impermeable to fluids syringed into the antrum. The right sinus was entirely filled with fluid contents and infiltrated mucosa. The foul ropy pus dislodged exactly resembled in odour that exhaled from the nose. In this antrum extensive jagged spurs of bone projected from the inner wall across the space. These had to be broken down in order

fully to clear the cavity of diseased products, and were so situated that by any other approach but the one adopted they could not have been reached, certainly not by an alveolar puncture. On each side free hæmorrhage took place, readily controlled by gauze plugging, for an hour or two. The next day the patient afforded the information, spontaneously, that it was the only day for twenty-two years on which she had not required one single handkerchief. By this time no perceptible odour from the nose was experienced, nor was the daily and usual bad taste in the throat experienced. It is now six weeks since the operation, and during that interval no crusts have been observed, while all characteristic odour is absent.

After twenty-four hours' purposive disuse of the lotion to the sinus and nose, all that was noticeable was a flaky, sparse return from the sinus, and a white mottling of pus, slight in character, over the nasal mucosa. When this last is now examined, after slightly cleansing, it is found to have undergone a visible change. It is for the most part lubricated with a healthy secretion and more voluminous in appearance, so that the nares do not look so roomy as before operation. Right ostium, slightly patent; left, not at all. Discharge through tubes from the antra slight and odourless. No pain or inconvenience from the presence of tubes. Lastly, the umbræ on both sides are rapidly giving place to normal transillumination, the light spot under each eye just appearing. Umbra of pupil still present. Since writing the above both ostia are now freely patent. This seems to have further benefited the condition of the nasal fossæ, which now remain for hours unaffected with any accumulation at all of discharge, remaining only just lubricated with a healthy, inodourless secretion. I may say here that the anaemia is now disappearing, and the acne of face and nose decidedly better, only a few discrete papules being present.

The next case of ozæna referred to is that of Miss M., aged eighteen, at school. The left naris is the seat of atrophic rhinitis; the space is roomy and the inferior and middle turbinated much atrophied. The usual characteristic odour is present. Crusts extend into the post-nasum. Right naris: here small bad-smelling crusts are found in the upper regions of the nose. A spur extends from the septum across the space. In this case the disease has been in existence over three years. Other members of the family are in good health, together with parents exceptionally so. For five or six months routine treatment only ameliorated the condition. With the light I observed both antral regions imperfectly illuminated: umbra in pupils. (In normal illumination both pupils are distinctly lighted up; when the antrum is diseased the papillary area is in dark shadow.) On opening both antra anteriorly I found no pus, but a deeply injected, infiltrated and thickened mucosa. Both ostia blocked. The result of four weeks' treatment is now no formation of crusts, all absence of odour and a general improvement *intra nares*. The mucosa of the left nares looks no longer shrunken and dry, and is free from crusts on its surface. The inflammatory condition previously existing round the spur and the inferior turbinated in the right naris is resolving itself, so that a better passage now exists in this nostril.

These two cases seem to indicate some connection or other between ozæna and antral disease. In both it will be noticed the ostia maxillaria were imperforate, and that in both treatment likely to subdue infiltration in the antral mucosa led to patency in one case and is promising the same result in the other, and that with recovered patency increased improvement occurred in the first case. So far I have found treatment *per antrum* in both cases bring about results immeasurably in advance of the routine at present advocated. Whether more radical and permanent results will follow time alone will show. The question of the connection between ozæna and antrum implication need not be difficult of ascertainment. The light is a handy and ready instrument. If implication of the antrum is indicated few, I imagine, of these unfortunate patients would refuse to undergo the steps suggested.

(To be concluded.)

ANNOTATIONS.

CYCLING AND LARYNGITIS.

DR. RAGONEAU has observed nine cases of young persons, aged from eighteen to twenty-seven, enjoying excellent health, and in eight of whom the lungs were absolutely sound, and presenting no ordinary tendency to catarrhs (in the ninth individual there was a slight degree of pulmonary emphysema), in all of whom a characteristic form of laryngitis has been produced by bicycle or tricycle exercise. The condition is thus described:—"A sore throat which has lasted a very short time, dryness and irritation, or burning sensation; later, cough, accompanied with expectoration of a little mucus, even sometimes tinged with blood; and the voice becomes muffled." Laryngoscopically, these patients present a condition of dryness and pronounced congestion of the pharynx; the mucous membrane is reddened, injected, or dotted with congested granulations; the vocal cords are pale red, but always discoloured, and covered with more or less viscous mucosities. All these individuals made a daily and often immoderate use of the bicycle or tricycle, and each time, after prolonged or rapid exercise, the laryngeal condition recurred. The inclining of the body forward interfering with respiration, the necessity of inhaling a considerable volume of air during such violent exercise with open mouth, and the penetration of a considerable volume of such air, at a pressure proportionate to the speed, into the larynx and lungs sufficiently explain the origin of the laryngeal catarrh.

The treatment of such cases of laryngitis is obvious.

The unhealthy and unphysiological attitude assumed by the average cyclist, with body bent forward, and chest contracted and head thrown back, when racing along the roads or toiling up hill, is one which must sorely tax the respiratory capacity of the individual; and, apart from the conditions mentioned above, there must of necessity be, in many instances,

a considerable amount of congestion of the throat and interference with proper circulation, induced by the abnormal position of the body. Cycling is so universal that many of the less robust individuals who ardently follow this amusement may suffer actual danger. We can well imagine how emphysema or hæmorrhage may be the result of continuous or violent exercise of this kind. Cycle riders should be advised to sit erect upon their machines, with the chest expanded, instead of adopting the ungraceful and unhealthy bent attitude so common, and take due care of their respiratory function, even at the cost of a little less speed of movement.

THE MODE OF CLOSURE OF THE LARYNX.

AT a recent meeting of the Physiological Society, Mr. Anderson Stuart gave a brief outline of his experiments in reference to the above subject, made (1) by observations in a man through a large opening in the side of the neck; (2) in normal persons by the laryngoscope; (3) experimentally in animals; and (4) from a study of the arrangements of the larynges of different animals and the intimate structure of the human larynx. He concludes that the epiglottis does not fold down in a lid fashion, but the entrance to the larynx is closed by the apposition and gliding and inclination forwards of the arytenoid cartilages, the upper parts of which, with the cartilages of Santorini, fit (in man) into the groove formed by the incurved margins of the epiglottic base. The muscles concerned are mainly the external thyro-arytenoidei. The ary-epiglottic folds are rendered tense by the ary-epiglottic muscles, including the oblique arytenoids. A T-shaped fissure is thus caused when the larynx is closed, the transverse limb being bounded anteriorly by the epiglottis, and, posteriorly, by the ary-epiglottic folds; the antero-posterior limb by the arytenoids and cartilages of Santorini. The cavity of the vestibule is obliterated, the sacculæ compressed, secretion possibly expressed, the ventricle encroached upon, the glottis lies at a lower level, and thus the vocal apparatus is moistened and protected during deglutition. The upward and forward movement of the whole larynx remains an important factor.

THE TREATMENT OF DIPHThERIA.

A VERY interesting "letter from Paris" to the *Archives of Pediatrics* reviews the latest methods employed by several French physicians in the treatment of diphtheria, which is worth reproduction in these columns.

Dr. JULES SIMON first cleanses the throat with a wad of antiseptic cotton, wrapped in Péan's long forceps, avoiding any wounding of the mucous membrane, after which the following solution is applied on a wad in another pair of Péan's forceps.

R. Salicylic acid.....	0.60 centigrammes.
Infusion of eucalyptus	60 grammes.
Glycerine.....	40 "
Alcohol	15 " M.

This treatment is carried out every two hours. All cotton used is burned,

and the instruments are disinfected by washing in boiling water. Dr. Simon uses no carbolic acid.

In the intervals of using this application a four per cent. solution of borax in hot water is employed freely for irrigating the throat, or for gargling, if the child is old enough to perform it. The atmosphere of the room is kept moist with a spray of thymol. The child is, where possible, changed into another room during the day, or, if impossible, inhalations of oxygen gas are employed. Alcohol, either as port or sherry, or in some other form, is frequently given, and three to six drops of the perchloride of iron in a little water is administered internally. No milk, mucilaginous solutions, or metal spoons are employed when the iron is given. To a child of five or six years of age Dr. Simon adds a preparation of cubebs and copaiba, but never prescribes opium in any form.

Dr. GAUCHER removes the false membrane with a rough brush holding the following solution :

℞. Camphor.....	20 grammes.	
Olive oil	15	„
Alcohol (90°)	10	„
Crystallized carbolic acid...	5	„
Tartaric acid	1	„ M.

This is applied every night and morning, care being exercised that none of the solution drops into the mouth or larynx. In the intervals, irrigation of the throat with one per cent. solution of carbolic acid every two hours is made. This treatment is said to be very painful.

Dr. LEGROUX, at the Trousseau Hospital, uses twice a day brush applications of—

℞. Glycerine	20 grammes.	
Alcohol	10	„
Creosote	1	„ M.

and prescribes a spray of creosote, 100 parts in alcohol 1000 parts, to be kept going all the day. In serious cases he uses hypodermic injections of—

℞. Aseptic olive oil	150 grammes.	
Creosote	20	„

and claims that this has a preventive action upon the broncho-pneumonias which may succeed tracheotomy.

Dr. LEGENDRE uses the following solution in a cotton wad several times a day—

℞. Naphthol.....	5 grammes.	
Alcohol	5	„
Glycerine	100	„ M.

and irrigates the throat in the interval with—

℞. Naphthol.....	0.20.	
Water	1000.	

Dr. HUTINEL, at the Children's Hospital, uses wad applications of—

℞. Terpene hydrate	8 grammes.	
Bichloride of mercury.....	0.30 centigrammes.	
Ess. mint	100 grammes.	
Alcohol	100	„
Ess. thym.....	a few drops.	M.

Irrigations are also made every two hours with hot borax water, and from 3 to 12 grammes per diem are given internally of benzoate of soda. Several physicians (Drs. Gaucher, Cadet de Gassicourt, and d'Heilly) are also trying sulforicinated carbolic acid as a local application.

R. Carbolic acid 10 grammes.
Sulforicinated soda 90 „ M.

applied on wads to the throat. It is not washed off by gargles or irrigations, but adheres to the mucous membrane, and is allowed to penetrate as much as possible. The application is also free from pain or irritation. The following is being used in the Children's Hospital at Nice, as an application to the throat and membrane every three hours—

R. Sulforicinated soda 80 grammes.
Salol 10 „
Creosote (or terpine)..... 2 „ M.

and the following is also employed there as a local application :

R. Glycerine 30 grammes.
Salicylic acid..... }
Terpine or creosote } 33 0'60 centigrammes.
Alcohol q. s. to dissolve. M.

Almost all French physicians use irrigations of hot borated water, and keep the atmosphere moist with steam sprays. In Nice a common earthenware pot is kept on the fire with thymol in water, or leaves of the eucalyptus tree kept boiling in water, the steam being allowed to pass into the room constantly.

For general treatment, tonics such as kola, cinchona, &c., and good wine are freely given ; fluid foods are prescribed, and where food is not taken rectal alimentation with peptonized foods is resorted to at once. Careful antisepsis is employed, all linen and dejections, as well as the closets, being treated with bichloride of mercury. Each member of the household, as well as the nurses, and those in attendance upon the patient, uses borated solutions, with which they wash the face and hands frequently, which is also done for the patient.

It will be observed that intelligent French physicians are no more agreed upon a common method of therapeutics for diphtheria than others, their efforts being based, however, upon the generally accepted propositions that the microbes in the membranes develop the toxins which poison the system, that these microbes develop on an inflamed surface only, or on one which is denuded of epithelial covering, and that the microbes preserve their vitality for a long time. The focus of infection must therefore be controlled by antiseptics, the mucous membrane be preserved from injury and be protected from the entrance of the bacillus, and enabled to eliminate the toxins, which are formed by the micro-organisms.

At the meeting of the British Laryngological and Rhinological Association, held on Friday, March 25th, 1892, the following notes and cases were presented :

By MR. LENNIX BROWN:—1. "A Case of Hypertrophic Rhinitis,

with old history of Lupus." 2. "A Case of Lupus of the Mouth, Fauces, and Larynx." (With microscopic specimens by Mr. WYATT WINGRAVE.)

By Dr. W. MILLIGAN :—1. "The Notes of a Case of Primary Nasal Syphilis." 2. "The Notes of a Case of Primary Abscess of the Larynx."

By Mr. WARD COUSINS :—"Notes of a Case of Deep Abscess of the Neck, followed by Acute Laryngeal Symptoms—Tracheotomy—Recovery."

By Dr. SANDFORD :—1. "Case of Bulbar Paralysis." 2. "Case of Paralysis of Left Vocal Cord, etc., from Injury."

By Mr. WYATT WINGRAVE :—1. "Some Points concerning the Pharyngo-Glossus and Lingual Tonsil." 2. "On some Characteristics (Histological) of Laryngeal Epithelioma." He also demonstrated the following microscopic specimens, etc. :—1. "Lingual Tonsil." 2. "Epitheliomata." 3. Recent specimen. "Membranous Laryngitis" (from a Case of Mr. JAKINS).

A Discussion on "The Necessity for Systematic Voice-Training in Preparing for Public Speaking" was introduced by Dr. SANDFORD, in which the following gentlemen took part :—The President (Mr. LENNOX BROWNE), Dr. FARQUHAR MATHESON, and Dr. DUNDAS GRANT. Mr. BEHNKE made a few remarks. The official report of this meeting will be published in the May number of this Journal.

Dr. DUNDAS GRANT has been appointed Otologist and Laryngologist to the West End Hospital for Nervous Diseases, London.

NOSE AND NASO-PHARYNX, &c.

Bull (New York).—*Tumours of the Orbit, secondary or consecutive to Tumours of the neighbouring bony cavities.* "New York Med. Journ.," Dec. 19, 1891.

THESE tumours are either fluid or solid. The former almost always arise in the frontal sinus or ethmoid cells and contain pus or mucus ; the latter are either solid or densely gelatinous, are always malignant, and arise in the maxillary, sphenoid or ethmoid antrums. Finally, a by no means uncommon growth in this locality is a bony tumour, or real ivory exostosis, arising from the bones surrounding the orbit.

Referring to the diagnosis of abscess of frontal sinus, the author has seen cases where there was never any pain during the development of the abscess. If with local pain there is coryza, ozæna, or purulent discharge from one nostril and the frontal boss is painful and protruding, and if the eye is displaced downwards and outwards, the lesion is almost certainly in the sinus, but may not be abscess.

The incision for the tapping of a frontal abscess should start from the inner canthus, immediately beneath the superior orbital arch, be carried

directly outward, for an inch and a half to two inches, so that the wall may be easily opened. The cavity should be explored with the finger and washed out with antiseptic solutions. The re-establishment of the channel of communication between the sinus and the nasal fossa may be made by opening into the ethmoid cells by chisel, mallet or trephine, or by introducing a catheter through the fronto-ethmoidal canal and then a drainage tube through the nose. The author thinks that in the many cases of nasal disease in which orbital abscess is observed the inflammatory process extended from the nose to the ethmoid cells and thence to the orbital tissue. The reverse may also be the case.

A fairly complete account of the various tumours that occur in the situations under discussion, and the symptoms caused by each, complete a valuable paper.

Barclay J. Baron.

Ziem (Danzig).—*Illumination of the Antrum of Highmore.* "Berliner Klin. Woch.," 1891, No. 48.

POLEMICAL article.

Michael.

Luc (Paris).—*Case of Empyema of the Antrum of Highmore, caused by Erysipelas Cocci.* "Deutsche Med. Woch.," 1892, No. 8.

COMPARE the report on the meeting of the Laryngologische Gesellschaft.

Michael.

Killian (Freiburg).—*My Experiences on Suppuration in the Antrum of Highmore.* "Münchener Med. Woch.," 1892, Nos. 4, 5, and 6.

THE author reports forty cases which he observed in the last forty years. Many of the patients had coryza. A large number had a discharge of pus from one side of the nose. There was often a strong fœtor with the pus. Very often the patient had severe pains, but nothing characteristic—pain often found in the whole side of the face, frequently beginning with caries of the teeth. In some instances hypertrophy of the anterior lip of the hiatus is observed. Differential diagnosis is sometimes possible between it and suppuration in the frontal bone. Both affections may be combined. Probes can easily be passed into the antrum. In operating, the author prefers to perforate higher than the canine fossa, namely, under the zygomatic arch. Irrigation and free drainage recommended. A chisel to be used if required.

Michael.

Bates, W. H. (New York).—*A Case of Nasal Reflex Asthenopia.* "Med. Rec.," Feb. 27, 1892.

THE patient had severe asthenopia, unfitting her for study or work, and unaffected by tonic or other treatment, the refraction of the eyes being normal. A pointed spur on the septum was cocaineized, and the asthenopia relieved for the ten minutes that the effect of the cocaine lasted. The spur was then removed, and continuous comfort followed. Unfortunately after some months the nose was injured, and the asthenopia returned. On examination a projection was seen at the seat of the former operation. This was removed, and complete and lasting relief has resulted.

Dundas Grant.

Cheatham.—*Some Cases of Nasal Surgery.* "The American Practitioner and News," Jan. 2, 1892.

THIS paper pleads for accurate surgery in the nose and naso-pharynx in hay asthma, mouth-breathing, and antral abscess. *Barclay J. Baron.*

Laker (Graz).—*Massage of the Mucous Membrane of the Nose.* "Präger Med. Woch.," 1892, Nos. 4, 5, and 6.

REVIEW of the book of the author. (Compare 1891.) *Michael.*

Sauer (Berlin).—*Soft Rubber for Erection of Lateral Curved Noses. Dilatation of Stenosed Nasal Cavities and Fabrication of Artificial Noses.* "Deutsche Zeitschrift für Zahnheilkunde," 1891.

COMMUNICATIONS on the application of the soft rubber for the said purposes, and details on its *technique.* *Michael.*

Rohrer (Zurich).—*Rhinolith.* "Wiener Med. Woch.," 1892, No. 5.

A RHINOLITH of 0.71 gramme weight was removed from a patient twenty-nine years old. Neuralgia of the right trigeminus and inflammation of the ear of the same side disappeared, but recurred a short time later. *Michael.*

Stillman, Frank L. (Columbus, O.).—*Two Cases of Rhinal Discharge.* "Med. Rec.," Feb. 13, 1892.

THE first was a typical case of antral empyema arising from dental disease, and cured under the usual treatment. The second had similar symptoms. On examination the pus was found to be exuding above as well as below the middle turbinated body, and the flow was increased by forward, and not by lateral, inclination of the head. Electric transillumination excluded antral disease, and absence of frontal pain excluded frontal sinus affection. The disease was, therefore, probably in the ethmoidal, and possibly the sphenoidal, cells. Treatment—galvano-cautery, douches, etc.—relieved her from migraine, but did not lessen the discharge. *Dundas Grant.*

Townsend (New York).—*Proximate and Remote Effects of Nasal Obstruction.* "Journal of Ophthalmology, Otology and Laryngology," Oct., 1891.

NOTHING new; the author believes in nasal obstruction rather than in a neurotic constitution as being the main cause of hay fever.

Barclay J. Baron.

Joins.—*Glycerine-cotton Pladgets in Atrophic Rhinitis.* "Journal of Ophthalmology, Otology and Laryngology," Jan., 1892.

THE pledget is introduced once or twice a day, it is left in the nostril for ten minutes and then the pledget is got rid of by blowing the nose, which, as long as there is a flow of mucus, must be repeated.

Barclay J. Baron.

Leal.—*Some Observations in Hay Fever.* "Journal of Ophthalmology, Otology and Laryngology," Oct., 1891.

THE author is a sufferer from the disease and is apparently a homœopath, and holds very gloomy views of the possibility of curing the malady by

known methods of treatment by drugs. Surgery is evidently a weak point with him, as he does not mention surgical interference with overgrown mucous membrane, etc., which is in most cases needed.

Barclay J. Baron.

Loebinger.—*Terpine Hydrate in the Asthmatic Stage of Hay Fever.* "New York Med. Journ.," Dec. 12, 1891.

THE author highly recommends the use of this substance, which is made of turpentine oil acted on by alcohol and nitric acid, in doses of fifteen minims, three times a day, in a capsule, in cases of the asthmatic seizures of hay fever. The patient's condition improves almost immediately after the first dose, the asthmatic wheezing yielding. A copious flow of fluid expectoration takes place. The drug may be safely administered in doses of sixty minims per diem even where there is kidney mischief present.

Barclay J. Baron.

Whiting (New York).—*The Treatment of Hypertrophied Turbinated Bones by means of Flap Operation.* "New York Med. Journ.," Dec. 12, 1891.

THE author first reviews the various methods of treating hypertrophy of the middle turbinated at present in vogue and suggests the procedure described as "flap operation," because he thinks that all these methods are essentially wrong, in that they cause loss of important mucous membrane. The trephine worked by electric motor is so applied to the lower edge of the bone as to drill out a piece, leaving the mucous membrane next the septum intact. This piece of tissue is then folded over the inferior cut edge of bone, it is kept in position by means of a small plug of cotton smeared with vaseline, and under antiseptic precautions heals by first intention. Button-holing of the flap may occur, but is not followed by sloughing, and should the septum so deviate towards the nostril operated on as to cause it to be cut by the trephine it can easily be prevented from adhering to the middle turbinated.

The advantages alleged for the operation are :—

1. That the minimum amount of traumatism is inflicted upon the nose, and very little mucous membrane is removed.
2. That union by first intention occurs, and so the production of a mass of cicatricial tissue is avoided.

Barclay J. Baron.

Miller, Frank E. (New York).—*Gottstein's New Improved Curette for the Removal of Adenoid Vegetations from the Vault of the Pharynx.* "Med. Rec.," Feb. 20, 1892.

THE improvement described is now well known in this country, and consists in a curvature of the working extremity on the flat, so that the edge cuts more in an antero-posterior direction than in the original form. [It is certainly a very safe instrument, but not well adapted for "searching" the fossæ of Rosenmüller, nor indeed for getting in front of the adenoid masses extending forwards under the arches of the choanæ. In the former regard it would often require to be supplemented by the finger-nail or Meyer's ring curette; and in the latter, either by these or by the heart-shaped modification of Gottstein's curette, which penetrates into the choanæ on each side of the septum.]

Dundas Grant.

Clive (Indianapolis).—*Surgical Treatment for Nasal and Naso-Pharyngeal Reflexes.* "The American Practitioner and News," Jan. 2, 1892.

THIS paper was read before the Mitchell District Medical Society, and dealt principally with hay fever. The author and those who discussed the question agreed in looking on accurate nasal surgery as being of prime importance in such cases. Removal of a polypus from the naso-pharynx was said to have caused "the nervous system to become in a tonic, clonic spasm," and the patient was confined to his bed for six months. [Serious work this !] *Barclay J. Baron.*

Ashhurst (Philadelphia).—*Tracheotomy for Obstruction of the Pharynx, with Removal of Mucous Polypi from the Nose.* "Med. News," Jan. 16, 1892.

THIS was the case of a boy, seventeen years of age, who nearly died of asphyxia from an immense polypus blocking up nearly the whole of the space behind the tongue, and also extending to about two inches from the incisor teeth. Tracheotomy was performed to save life. Later on, a polypus, the size of a hen's egg, was removed from the posterior part of the middle turbinated bone of the left nostril, by means of a wire guided through the anterior nares to the naso-pharynx by means of a Bellocq's canula. At the same time a larger polypus was removed in fragments from the right nostril. He was discharged practically well, after repeated cauterization of the stumps of the polypi and the turbinated.

Barclay J. Baron.

Teets (New York).—*The Pharyngeal Tonsil or Treatment of the Naso-Pharynx.* "Journal of Ophthalmology, Otolology and Laryngology," Oct., 1891.

THE writer prefers Curtis' cutting forceps for removal of growths in the naso-pharynx. *Barclay J. Baron.*

MOUTH, TONSILS, &c.

Becker.—*Contribution to the true Cerebral Glosso-Labio-Pharyngeal Paralysis.* Virchow's Archiv, Bd. 124, p. 334.

THE author relates a case of this disease in which, on *post-mortem*, no disease of the pons and no atheromatous degeneration of the cerebral arteries were found. There was multiple sclerosis in the cerebral hemispheres and descending degeneration of the pyramids. *Michael.*

Kitchin, J. M. W. (New York).—*Tonsillotomy and its Therapeutic Efficacy.* "Med. Rec.," Jan. 16, 1892.

DR. KITCHIN always uses the guillotine and has beside him a basin of cracked ice to check the hæmorrhage, nothing further having in his experience ever been necessary. Tonsillotomy will almost entirely prevent attacks of follicular, as well as peritonsillar inflammations. [The practitioner when advising tonsillotomy should never forget the "almost."—D. G.] In a number of patients he had removed one tonsil and every

one returned to have the operation repeated on the other one, because they found immunity from throat troubles on the excised side, while suffering repeatedly on the other. He deprecated postponing the operation till the end of an attack of quinsy, and insists on its performance at the outset. He appends the following list of ailments which this operation will remedy, and considers that more might be added:—"Anæmia, "chorea, and other effects due to insufficiently aerated blood; noisy "respiration, snoring, cough peculiar to the condition, impaired voice and "articulation; shortness of breath, palpitation of the heart, and spasm of "the glottis; broken sleep, nightmare, difficulty in swallowing, bad "breath, disturbances of digestion, and impaired taste; mouth-breathing "and facial deformity; hyper-secretion of mucus and post-nasal catarrh; "impaired nasal respiration and hearing; sometimes local pain, follicular "pharyngitis and laryngitis." [Rather a "large order" ?]

Dundas Grant.

Meyer (New York).—*Excision of the Right Tonsil, the Pharynx, and the Tongue for Sarcoma.* "New York Med. Journ.," Jan. 30, 1892.

THE operation was performed according to Miculicz's method, and the patient can now masticate and swallow well, and can articulate sufficiently well to make himself understood.

Barclay J. Baron.

Rebitzer.—*On Carcinoma of the Œsophagus.* Nürnberg, 1889.

In twenty-nine cases—twenty-five primary, and four secondary cancers—the tumour was found most often in the lower part of the Œsophagus—twenty-one in men and eight in women.

Michael.

Richardson.—*A Case of Total Obliteration of the Œsophagus, throughout the greater part of its Course of Doubtful Origin—External Œsophagotomy and Attempts at Dilatation—Death.* "Boston Med. and Surg. Journ.," Jan. 21, 1892.

THIS was a patient, three years old, who had had increasing difficulty in swallowing for six months. The operation was performed, a firm, fibrous stricture was exposed at the level of the sterno-clavicular articulation, which was dilated, and milk and brandy passed through a catheter. The child died, and the food was found in the right pleural cavity, having passed through a false passage. The autopsy revealed complete obliteration of the gullet for nearly its whole length, the cause of which is not, however, stated. The author believes in the feasibility of exposing, in children, an Œsophageal stricture situated five inches below the incisor teeth. He also thinks that, judging from the ease with which he made a false passage, we ought to be extremely careful in such cases. He considers it unjustifiable to attempt any radical dilatation of benign strictures situated within reach of the finger, without first exposing the parts by external incision.

Barclay J. Baron.

Chappell, Walter F. (New York).—*Treatment of Œsophageal Stricture by Permanent Tubage.* "Med. Rec.," Feb. 20, 1892.

EVEN when the disease has ulcerated through into the trachea Dr. Chappell considers that a long feeding-tube can be passed if a short tube

has been used, as in such a case the œsophagus rarely becomes completely closed. He has found the permanent short tube beneficial in cases of traumatic and of hysterical stricture. He prefers the tube to be open at the tip. Before introduction the tube should be washed in carbolic solution and smeared with vaseline, and the patient should swallow "two or three teaspoonfuls of a one per cent. solution of olive oil and cocaine." Instead of bringing the thread attached to the tube out through the mouth, he draws it through the nose by means of a soft rubber catheter introduced through the nostril into the pharynx. The "gastrotomy" alluded to in this excellent, practical paper as preventible is no doubt a *lapsus calami* for "gastrostomy." *Dundas Grant.*

LARYNX, &c.

Holmes, Gordon (London).—*Acute Catarrh of the Larynx.* "Lancet," Feb. 6 and 13, 1892.

THE literature of the disease is briefly sketched, and the symptoms, both subjective and objective, are described, the nocturnal character of the "laryngitis stridulosa" of children being specially referred to. The writer thinks that getting the feet wet has been somewhat over-rated as a cause of acute laryngeal catarrh. The nocturnal attacks of dyspnoea and stridor characteristic of the disease in children is attributed by Dr. Holmes to spasm of the constrictors of the glottis, not to agglutination of the cords by viscid exudation (Niemeyer and Mackenzie), nor to the narrowness of the child's glottic chink, aided by the relaxation of respiratory action which occurs during sleep (Krishaber). The suddenness and evanescent character of the attacks distinguished the disease from true croup, and, furthermore, the resonant cough is evidence of the absence of exudative membrane, the presence of which would muffle the sound. Later, of course, when the membrane is thrown off a ringing "croupy" cough is possible. The practitioner is warned to keep before his mind the possibility of some small toy which the child has had in its mouth while going to sleep being drawn into the air-passages and setting up a form of obstruction, the symptoms of which might readily be mistaken for those of laryngitis.

The prognosis in professional voice-users has to be more guarded than in others. The paper concludes with an approving description of the classical methods of treatment. *Dundas Grant.*

Wright.—*Four Cases of Tubercular Laryngitis.* "Journal of Ophthalmology, Otology and Laryngology," Oct., 1891.

THERE is nothing special in these cases, one of which, however, improved after tracheotomy, as is often seen. *Barclay J. Baron.*

Scholefield, R. E. (London).—*A Case of Herpes of the Larynx.* "Lancet," Jan. 30, 1892.

A MAN, aged forty-nine, was attacked with a feeling of "tightness" in

the throat, and was next day so troubled with dyspnœa, agony in swallowing and nervous disturbance that he applied for relief at St. Bartholomew's Hospital. On examination there was found a circumscribed, œdematous swelling, almost polypoid in character, on the left ary-epiglottic fold. Next day this was larger and more milky in colour, and on the following day formed a complete bulla. At the same time a crop of herpes appeared on the upper lip. After another twenty-four hours the bulla had burst, and there was seen a white patch of macerated epithelium. The voice throughout was badly affected, and the man, whose febrile disturbance had raised his temperature above 103°, got well in a few days.

Dundas Grant.

Baginsky (Berlin).—*Laryngological Communications*. "Berliner Klin. Woch.," 1891, No. 50.

1. *Nystagmus of the Vocal Bands*. A patient, sixty-one years of age, received an injury on the right side of the chest, followed by meningitis and pneumonia. When twenty years of age paralysis of motion and anæsthesia of the left leg set in. For a time afterwards this improved. At the age of twenty-nine complete aphonia set in, with dyspnœa. She also suffered from an ovarian tumour. Ovariectomy was performed in 1882, the case being described by Landau and Remak in the "Zeitschrift für Klin. Med.," 1883. At the time the patient consulted the author she complained of nothing in the throat but hoarseness. With the laryngoscope chronic laryngitis was diagnosed, and also the following condition. The arytenoid cartilages made regular clonic contractions, fifty in the minute. There were short adducting motions during the expirations, but not during inspirations. The author was inclined to think hysteria was mainly the cause.

Michael.

2. *Carcinoma of the Thyroid Gland and the Larynx*. The tumour, which had destroyed the thyroid gland, caused a compression and stenosis of the trachea and paralysis of the left vocal cord, by compression of the recurrent nerve. Death from pulmonary œdema.

Michael.

Bevill, Cheves (Winfield, Arkansas).—*Cockle-burrs in the Larynx*. "Med. Rec.," Jan. 9, 1892.

AN enumeration of cases published by various observers. In one case Dr. Crowley wrapped his index finger with cotton and managed with it to entangle the spicules of the burr, so as thus to be able to withdraw it.

Dundas Grant.

Adler (New York).—*A Case of so-called Laryngeal Vertigo*. "New York Med. Journ.," Jan. 30, 1892.

THIS is the case of a merchant, fifty-three years old, who had never had syphilis, was not a drunkard, and was in good health. In November, 1890, he had cough, due to bronchial catarrh, and in a paroxysm of cough he suddenly fell from his chair to the floor, totally unconscious. He had no premonition, no giddiness, faintness, nor any abnormal sensation in the larynx. The unconsciousness lasted a few seconds, and the patient complained of nothing when he recovered his senses. He was noticed

to choke when coughing, and also the cough was very like that of pertussis, except that the noisy "whoop" was wanting. In April, 1891, he had influenza, followed by a violent spasmodic cough, and again the attack of unconsciousness occurred. The pharynx is granular, uvula long, larynx slightly hyperæmic. Opiates, bromides, blisters, iodide of potassium, and laryngeal sprays, were absolutely useless in preventing the frequent occurrence of unconsciousness, which took place as many as five times daily. It was noticed, however, that not every severe coughing fit was followed by loss of consciousness. Cure rapidly followed shortening the uvula! Gleitsmann and Charcot are quoted as having cured such cases by cauterizing the lingual tonsil or pharyngeal granulations.

[This case is very interesting and uncommon, but a minor degree of nervous disturbance is often witnessed in the larynx, where surgery applied to the uvula, lingual tonsil, or pharynx cures quickly after all drugs have in turn been tried and found wanting. Let us take a lesson from this case.—*Recp.*] *Barclay J. Baron.*

Von Doukoff, E. (U. S.).—*Tracheotomy without the Use of the Tube.* "Med. Rec.," Jan. 23, 1892.

THE author kept the opening patent simply by ligature, one on each side, fastened behind the neck. Very little after-management was required. The watcher was given a dull forceps with which to remove any membrane which might present itself at the opening. *Dundas Grant.*

Prescott and Goldthwait (Boston).—*A Report of 392 Cases of Intubation and 139 Cases of Tracheotomy done at the Boston City Hospital.* "Boston Med. and Surg. Journ.," Dec. 31, 1891.

THE conclusions are as follows:—392 cases of intubation showed a mortality rate of 79·59 per cent.; 139 cases of tracheotomy showed a death rate of 88·5 per cent. Altogether 2815 cases of intubation and 23,941 cases of tracheotomy have been collected and analysed, and there is very little difference in the percentage of deaths in the two operations.

Barclay J. Baron.

Sutherland, G. A. (London).—*A Case of Bronchiectatic Abscess due to the Impaction of an O'Dwyer's Tube.* "Lancet," Jan. 23, 1892.

LARYNGOTOMY was performed on a patient of seventeen and a half for traumatic laryngitis. This was followed by intubation on account of the stenosis remaining after the removal of the laryngotomy tube. During a fit of coughing the string broke and the tube passed into the trachea. After a time he coughed up quantities of muco-pus, and later a bronchiectasis was diagnosed in the left lung. Operative endeavours were made to reach the cavity from the chest-wall, but the patient died of hæmorrhage. After death the tube (No. 3) was found in the left bronchus, and a large bronchiectatic cavity extended through the lung communicating with the operation opening. For a time after the first disappearance of the tube there was so little obvious discomfort that it was believed the tube had been coughed up and swallowed. Dr. Sutherland concludes that it was then in the trachea from the following facts: (1) the audible

breathing localized in the trachea, (2) entire absence of signs pointing to its presence in a bronchus, (3) the sudden and lasting cessation of the loud breathing after a severe fit of coughing, followed immediately by the appearance of signs pointing to a block in the bronchus and collapse of the lung.

Dundas Grant.

Tietze (Breslau).—*Surgery of the Upper Air Passages*. "Zeitschrift für Chirurgie," 1891, p. 438.

THE author reports on the operations performed in the clinic in Breslau in the years 1872-89. Six hundred and seventy tracheotomies for diphtheria, with twenty-two and a half per cent. cures, nine for foreign bodies, two of them died, ten for other causes. Laryngo-fissure was performed for foreign bodies. Of thirteen extirpations of the larynx, five cases died from the operation, the others recurred after a short time.

Michael.

Loeb.—*Total and Partial Laryngeal Extirpation*. Inaugural Dissertation. Bonn, 1891.

THE author reports on seven operations. One total extirpation for carcinoma; four unilateral for carcinoma, and two unilateral for tuberculosis. Of these cases, two were cured; two died from bronchitis; one has returned, and two are yet under treatment.

Michael.

McLeod (Calcutta).—*Excision of the Larynx*. "Indian Med. Gaz.," April, 1891.

A YOUNG Hindoo, twenty-eight years of age, presented a firm mass on the left side of the neck adherent to the left side of larynx, involving the left half of the hyoid bone, and the left lobe of the thyroid, reaching to the inner border of the sterno-mastoid and to the middle line of the throat. It was free from the spine and moved with the larynx. The epiglottis and left aryteno-epiglottidean fold were thickened. Hoarseness, dysphagia and slight dyspnoea existed.

After preliminary tracheotomy laryngectomy was performed. As an irregular mass occupied the interior of the larynx and the right half was found, under operation, to be diseased, the tumour with the whole of the larynx including the epiglottis, and the anterior wall of the pharynx were removed, the aperture left being utilised for passing a tube to feed the patient. The hyoid bone was left *in situ* to support the tongue. Three enlarged glands were also removed. The upper end of the wound was closed with stitches, the rest kept open. On the forty-seventh day after the operation the patient was quite strong and walking about the ward comfortably, the whole of the wound, except two openings in the centre, being closed. Of these openings the upper one was the aperture of the pharynx, through which the feeding tube was passed; the lower one was the opening into the trachea in which the tracheotomy tube was placed. He could feed himself and had no discomfort.

R. Norris Wolfenden.

THE EAR.

Pooley, Thomas R. (New York).—*Perichondritis Auriculæ Affecting both Ears.* "Med. Rec.," Feb. 6, 1892.

A FEEBLE woman had been under treatment for furuncles in the meatuses of both ears for four weeks, when the conchæ began to swell. The swelling—on both sides—spread till it involved the whole front of the auricle, and then extended to the posterior surface as well. The lobules alone escaped, and the ears became rounded, uneven swellings of boggy consistency. The most elastic part was at the posterior border, and incisions there gave vent to a little thin matter with yellow shreds. A probe could be passed over both surfaces of the cartilage, which was rough. Antiseptic injections were practised through the openings and recovery ensued with the typical deformity. *Dundas Grant.*

Vali, Ernst (Buda-Pesth).—*Attempt to make an Artificial Auditory Meatus in a Case of Congenital Absence of Auditory Meatus and Bilateral Defective Development of the Auricle.* "Arch. für Ohrenheilk.," Dec., 1891.

A BOY of twelve, of feeble development, hypso-dolicho-cephalic, presented in the normal situation of the right ear a piece of helix, about two and a half cm. long, closely applied to the cranium. At its upper part was a small skin-covered, fatty nodule, beneath which was a small opening about three mm. deep. At the lower part could be felt the ill-developed tragus and antitragus, and behind the tragus was a small depression representing the meatus. The lower jaw was small and the angle formed by the body and ramus 105°. On the left side, the place of the auricle was occupied by a thickened helix one and a half cm. long and one cm. broad, distinctly in-rolled, the cartilage being obvious to touch. At the lower part of this abnormal growth there was seen both on the outer and inner surface a depression of the size of a lentil. Below was a lobule two cm. in length united to the helix by a narrow bridge. The upper and lower borders of this lobule were inclined towards the face so as to form a funnel-shaped pouch about one and a half cm. deep. Behind the defective helix was a gristly skin-covered growth of the size of a bean, through which a small depression (ext. aud. meat.?) could be felt.

At about four mm. directly backwards from the left angle of the mouth was a small tab of skin the size of a lentil, with no corresponding abnormality on the inside of the cheek. There was no facial paralysis. The left half of the velum palati was thicker than the right and immobile during phonation. The lower third of the left tonsil was marked by a deep furrow and the posterior part of the left inferior turbinated body was similarly marked. The orifice of the left Eustachian tube was a little expanded, cleft-like.

Hearing-power was fairly developed. On the right side he heard a watch tick at 23 cm., whispering close behind him, and ordinary conversation at 1·30 metres. Rinne's experiment was positive. On

Politzerization he felt the air go to his ears, but Vali could not detect it with the otoscope. On the left side, watch-tick was heard at 23 cm. ; whispering close behind the ear ; ordinary conversation at 1·10 metres. Rinne's experiment was also positive. Politzerization the same as on the right side. It was fairly certain that in this case the middle and internal ears were normal. The arrest in the development must, therefore, have occurred not earlier than the fourth month, and was probably due to trauma as from compression by the umbilical cord.

Under the circumstances it was thought justifiable to operate tentatively on the right side. An incision was made behind the auricle and it was dissected forwards. The depression in which the meatus was expected to be found led only to a hard bony mass, which could not be perforated, and any further operation had to be abandoned.

Dundas Grant.

Eitelberg (Wien).—*Diseases of the Ear following Nasal Irrigations and Nasal Operations.* "Wiener Med. Presse," 1891, No. 23.

THE author advises the greatest caution in application of nasal irrigation. He has observed suppuration of the ear due to irrigation, after removal of polypi and vegetations, and cauterization of the nasal mucous membrane with chromic acid.

Michael.

Parker, Rushton (Liverpool).—*Two Cases of Pyæmia following Suppuration of the Middle Ear, treated by Ligature of the Internal Jugular Vein and Cleaning out of the Lateral Sinus.* "Liverpool Med. Chir. Journ.," Jan., 1892.

A BOY, with chronic suppuration of the middle ear, was attacked with local pain, followed in a few days by rigors and daily vomiting. He was giddy, drowsy, and occasionally delirious. The chief features were : deafness, and fœtid discharge from the left ear, swelling and tenderness of the neck just below, and double optic neuritis. Plugging of the jugular was diagnosed, the mastoid appearing normal. The symptoms continued in spite of approved local treatment, and an incision was made exposing the jugular vein and the mastoid region. The vein was ligatured and cut, and found to be plugged in its upper part and surrounded by a mass of swollen lymphatic glands. The sinus was exposed by gouging in the mastoid region, and was found to contain green purulent lymph and clot for a short distance, pure blood coming from above on probing. The diseased piece was cleared, scraped, and irrigated, and the part above plugged with antiseptic wax. In two days the temperature rose again, the wax was removed, releasing some fœtid pus, and the mastoid antrum opened, allowing the removal of a small quantity of cheesy material. [It seems strange that the antrum was not opened in the first place.] The patient recovered, and even the optic neuritis became ultimately less.

A second case was that of a boy of seven, similarly affected. The mastoid antrum was opened, and the sinus exposed. The latter, when pricked, gave vent to pure blood. Relief was obtained for a few days, but fever returned, and the jugular vein having been ligatured, the sinus was found to be lined with putrid lymph and filled with putrid pus. There

was local improvement, but the patient died shortly, with symptoms of meningitis.

Dundas Grant.

Bates, W. H. (New York).—*A Case of Traumatic Deafness.* "New York Med. Journ.," Jan. 16, 1892.

A MAN of thirty-two was thrown down by a dynamite explosion, and rendered unconscious for a short time. There occurred a bloody discharge from the ears at the time of the accident, a beating noise in the ears, and complete deafness. The discharge became serous, then purulent and offensive. Both membranes were ruptured. After five weeks, examination with the tuning-fork (pitch not mentioned) showed air- and bone-conduction both lowered, but air-conduction better than bone-conduction. This the writer accepted as diagnostic of nerve-deafness. A month later bone- was better than air-conduction, although hearing remained the same. Inflation now improved the hearing power considerably, though not for any length of time, whereas at first it had had no beneficial effect. Ultimately the membranes healed, chiefly under Politzerization, and naso-pharyngeal medication and audition became once more normal. [There was probably concussion of the labyrinth in addition to the tympanic trouble. It would have been important to know that the ears were previously normal. In comparing aërial and perosseal conduction it is necessary to use a very low-pitched tuning-fork ($C_7 = 256$ v, or better $C = 128$ v), as with higher-pitched forks the air-conduction may be better than the bone-conduction, even in presence of considerable middle ear catarrh.]

Dundas Grant.

Vaughan, J. C. (Jhelum).—*Aural Vertigo following an Injury to the Head.* "Indian Med. Gaz.," Feb., 1891.

A HEALTHY officer, aged thirty-nine, was thrown from his horse, striking the right side of his head. There was a slight contusion above and in front of the meatus. He was slightly dazed for a few minutes, but recovered to all appearances completely. A fortnight later he first experienced an attack of giddiness when turning from his back on to his right side in bed. Similar attacks occurred several times. He had no tinnitus and no conscious deafness. There was, however, diminution of hearing distance for the watch-tick, and when a watch was slid over his cranium it was heard all over the left side and top, but not on the right till within an inch of the auditory meatus. He next noticed "a sound as of water," and occasionally a peculiar ticking in the ear. The vertigo then began to abate and recovery ensued. The area supplied by the vestibular, as distinguished from the cochlear branch of the auditory nerve, seemed to have sustained a shock followed (after a fortnight) by a period of irritability.

Dundas Grant.

Mills, Charles K. (Philadelphia).—*On the Localization of the Auditory Centre.* "Brain" (winter number), 1891.

A CASE is narrated of a right-handed woman long affected with valvular disease of the heart. After an apoplectic attack, which occurred fifteen years before her death, she was "word-deaf," but not paralysed. Nine years before death she had a second attack, after which her deafness

increased for sounds as well as for words and her *left* arm was partially paralysed. When seen a few days before her death she could understand nothing, and was to all tests absolutely deaf.

At the autopsy the first left temporal convolution was shrivelled to a thin strip, except at its anterior extremity. There was a depression at the posterior fourth of the second convolution, the result of embolic softening. In the right hemisphere the first and most of the second temporal gyri were destroyed.

Mills concludes that the centre for word-hearing is situated in the hinder thirds of the first and second left temporal convolutions. The field for all auditory memories covers a much larger cortical area. For complete brain-deafness (sounds as well as words) the destruction of the two upper temporal convolutions on both sides is necessary. Several other conclusions of great interest are drawn. *Dundas Grant.*

ASSOCIATION MEETINGS.

BERLINER MEDICINISCHE GESELLSCHAFT.

Meetings, Feb. 3, 10 and 17, 1892.

Baginsky.—*Etiology of Diphtheria.*

BACTERIOLOGICAL researches which the author made in 154 cases of diphtheria showed that in 118 cases Loeffler's bacilli were found. Of these 45 (equal 38 per cent.) died. In 44 cases tracheotomy was necessary. Of the other 39 cases, only four died. The author concludes that we have two forms of membranous pharyngitis. That which is caused by Loeffler's bacilli is much more severe; the other form is relatively harmless. It is caused by cocci. All cases of scarlatinal diphtheria showed only cocci, and no Loeffler's bacilli; the cases of membranous rhinitis showed the bacilli.

Discussion on Dr. BAGINSKY's Paper.

RITTER has made bacteriological examinations in eighty-two cases suspected to have diphtheria. He found Loeffler's bacilli in twenty-nine cases. In no cases did he find them in the blood. In cases of true septic diphtheria no micro-organisms are found in the blood. It is produced by the ptomaines of the bacilli. If streptococci are found it is a case of mixed infection. Paralysis also can be produced by infection of streptococci alone.

ZARNEKOW regards as of special interest the presence of diphtheria bacilli in cases of rhinitis fibrinosa. Such cases prove that some people are protected.

TROJE believes that the pseudo-diphtheria bacillus is only a modified form of Loeffler's bacillus, which is not pathogenic, and it is not possible to make cultures. In mixed infections the streptococci are of great influence.

B. FRAENKEL said that he described, ten years ago, a membranous inflammation which is not at all diphtheritic.

HENOCH said that in some cases of angina lacunaris the bacteriological examination may be of great advantage, but it is not possible for the practical physician to perform such examinations in all cases ; therefore all suspected cases must be treated as true diphtheria. He is glad to see that bacteriological examinations have confirmed his views concerning scarlatinal diphtheria. Concerning croup, he believes the existence of a true fibrinous, and not diphtheritic, croup.

SCHEINMANN said that all the cases of rhinitis fibrinosa now published were cured, also the two cases referred to by Baginsky ; therefore the presence of Loeffler's bacillus cannot be viewed as a sign of bad prognosis.

P. GUTTMANN does not believe that those cases in which the bacillus is not found are diphtheria. Of eight cases examined in his hospital, in two it was not found. In scarlatinal diphtheria he did not find it, and therefore he believes that this form must be different from the other diphtheria.

VIRCHOW first made the distinction between diphtheria and croup. This distinction must be kept in view, whether there be bacilli or not, because it will ever be of the greatest practical importance. He believes, for example, the enteritis produced by sublimate must always be called diphtheritic. Concerning the terminology, a difference between clinical and anatomical facts must be made.

BAGINSKY concludes that Roux and Yersin were the first who produced the diphtheritic poison. He agrees with Virchow concerning the clinical difference between croup and diphtheria, in spite of their etiological unity.

HEYMANN reported a case of a patient thirty-five years old, suffering from tuberculous ulceration of the cheek. *Michael.*

VEREIN FÜR INNERE MEDICIN. IN BERLIN.

Meetings, Dec. 7, 1891, and Feb. 22, 1892.

TREITEL showed the specimen of a case of colossal specific destruction of the nose and frontal bone. *Michael.*

NEUMANN agrees with the view that *Bednar's aphthæ* are caused by the irritation of the mouth of children by cleansing with lint. In the Präger Gebäranstalt, of the children whose mouths were so cleansed 54 per cent. had aphthæ ; in those which had been let alone, only 2 per cent.

LEHMANN recorded the cases of two patients with *aneurism of the aorta* with paralysis of the left recurrent nerve. *Michael.*

MEDICINISCHER VEREIN IN COTTBUS.

Meeting, Oct, 1891.

THIEM showed artificial teeth which he had removed from the larynx.

Michael.

DORPATER MEDICINISCHE GESELLSCHAFT, 1891.

OTTO showed two rhinoliths : one was two centimètres long, one centimètre broad, removed from a patient twenty-four years old, who suffered from headache and fœtid discharge from the left side of the nose. Its centre was a piece of porcelain. The second was from a patient forty years of age.

Fœtid discharge for four years. It was one-and-a-half centimètres long, and a quarter centimètre broad.

Michael.

LARYNGOLOGISCHE GESELLSCHAFT IN BERLIN.

Meetings, Jan. 29 and Feb. 19, 1892.

ROSENBERG. A patient with *perforation of the soft palate*. In this case the intumescence of Passavant can be seen very well.

SCHEIER. *Gunshot Wounds of the Nose, and Accidents*. (1) A patient, eighteen years old, wounded by a revolver projectile. It went by the left side of the upper lip into the antrum of Highmore. Severe hæmorrhage; the projectile could not be found. Cure five weeks later. (2) A patient, twenty-two years old, was wounded by a gunshot in the zygomatic region. Loss of sensation took place on the right side of the face. The lamina papyracea was destroyed, and the projectile must be situated in the frontal sinus. It could not be found in the orbit. Afterwards meningitic symptoms set in, which disappeared in some days. The paralysis and the amaurosis remained. The patient had another projectile in his under jaw from a gunshot four years before. (3) A patient, twenty-three years old, fired a revolver into his mouth. Defect in the palate; laceration of the antrum of Highmore.

HOLZ reported on two cases of *Traumatic Neurosis*; one of them was combined with a nervous aphonia and paralysis of the thyro-arytenoidei interni—the other with a paresis of the crico-arytenoidei postici and laterales.

SCHEINMANN showed two cases of *Eversion of the Ventricles*. In both cases the ventricles covered the vocal bands as greenish-red masses. It was possible to remove them by a probe.

LUBLINSKY referred to a similar case in his practice.

B. FRAENKEL believed that such cases are not an eversion of the ventricle, but an intumescence of the under-face of the ventricular band. It must be called chorditis ventricularis hyperplastica inferior.

HEYMANN. *On Diseases of the Upper Air-Passages in Influenza*. The author reported a patient with intumescence of the left arytenoid cartilage. The cartilage was covered with a yellow exudation, which could be removed by a probe.

ROSENBERG had observed laryngeal and nasal complications in thirty-eight cases.

Michael.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(“Med. Rec.,” Feb. 6, 1892.)

Meetings, Feb. 2, 3, and 4, 1892.

MARTINDALE, F. E. (Port Richmond).—*Diphtheria, with Special Reference to a New Method of Treatment*.

A recommendation of an atmosphere containing the vapours of tar and turpentine. Within three years he treated twenty-four cases, losing but one. [Compare the similar treatment recommended by Dr. Charles Smith—JOURNAL OF LARYNGOLOGY, March, 1892, p. 113—viz., one part of carbolic acid, one of eucalyptus oil, and eight of turpentine, for saturating cloths suspended near the patient.]

ROE, JOHN O. (Rochester, U.S.)—*Nasal Catarrh in Children: Importance of Early Treatment.*

Every condition of the nasal passages which produces an obstruction or causes contact between parts normally separate should be corrected. Any associated dyscrasia or debility of the system should also receive careful attention. Failure to give attention to catarrhal conditions in children often leads to most serious consequences relating to respiratory disorders or permanent deafness.

GOODWILLIE, D. H. (New York).—*Fibroids of the Naso-Pharynx, and their Treatment by means of the Electro-Cautery.*

Some rare cases described, and instruments of his own device exhibited.
Dundas Grant.

MEETING of the OTOLOGICAL SECTION of the Sixty-fourth Gathering of the ASSOCIATION of GERMAN NATURALISTS and PHYSICIANS.

(*Monats. für Ohrenheilk.*, Jan., 1892.)

(*Concluded.*)

Dr. LOEWE (Berlin).—*On the Treatment of Blennorrhœa of the Middle Ear.*

The principle of the treatment is absorption of the discharge at the moment of its secretion, so that the diseased tympanum may remain continuously in a dry state.

If there is an acute median otitis (pneumo-diplococcus otitis) with profuse secretion and total destruction of the drum membrane, the tympanum and external meatus are to be completely filled with absorbent dressing material (cotton-wool, etc.). This is wet through in three or four hours, and has then to be renewed, day and night. Healing usually takes place in from two to four days. If at the end of a week there is still a discharge, the affection is not confined to the tympanum proper, but has affected one or more of the annexa ("attic," antrum or mastoid cells). In this case the next step is the opening of the attic through the external meatus so as to leave an aperture in the epitympanic bone of three or four millimètres in diameter. When this is done the attic can be plugged with absorbent wool and thereby kept dry. If in spite of this the disease continues unchanged Loewe holds that the antrum is affected, and opens that cavity. This is done by means of a dental drilling apparatus. After, as Stacke does it, the cuticular covering is detached from the upper and posterior part of the osseous meatus the bone is cleared away till the antrum is reached, so that, as it were, a second meatus is formed. The absorbent wool can thus be introduced into the antrum. Should recovery not quickly follow, the assumption is that the mastoid cells are involved, and in order to reach them he removes the cortical layer of the mastoid process by means of the dental machine.

This "tamponade" method is only available when the perforation is of large size. If paracentesis is required, Loewe cuts round the whole of the membrane excepting the membrana flaccida, detaching it from the limbus cartilagineus, so that a large semilunar opening is left, and the middle

portion of the membrane with the manubrium is drawn back on to the promontory.

This method of treatment is applicable, with suitable changes, to all the forms of middle-ear blennorrhœa. The most important difference is when the secretion is not purely serous but muco-purulent. The fluid is then not so suitable for capillary absorption, as only the watery part would be taken up, and the muco-purulent residuum would remain behind. In these cases he insufflates a little powdered boracic acid before introducing its absorbent dressing.

Dr. HECKE (Breslau).—*Instances of Recovery from Metastatic Pyæmia arising from Middle Ear Disease.*

A youth of seventeen had been long under treatment for middle ear suppuration. Repeated paracentesis of the membrane had been done, a polypoid vegetation had been removed from the tympanic cavity, and the stump had been cauterized. He had long rigors, mastoid tenderness, continuous high fever, and profuse purulent discharge from the ear. The mastoid was opened and found soaked with pus. Four days later the left pleura became inflamed, and next day, after a sudden rise of temperature to 42° C. the left sterno-clavicular articulation. The joint was opened, and on the following day there ensued a right-sided pleurisy and inflammation of the right shoulder. Recovery took place.

The second patient, eighteen years of age, suffered from chronic catarrh of the naso-pharynx, Eustachian tube, and tympanum. Profuse suppuration came on as the result of an acute exacerbation in the right middle ear. In spite of enlargement of the perforation, repeated rigors took place, and the mastoid was opened. The fever diminished, but in a few days the rigors recurred, the right elbow swelled and had to be opened, the contained fluid being serous and turbid, showing crowds of streptococcus pyogenes. After a few short rigors complete recovery resulted.

Dr. HECKE on *Extra-dural Abscess in the course of Middle Ear Disease.*

Most of the accumulations of pus between the cranium and the dura mater are tuberculous according to Volkmann, Kraske, Heinecke, Krause, and others. Two cases narrated by Hecke resulted from influenza.

The first was a strong man of thirty-eight, who at the end of his influenza required treatment for catarrh of the nose, Eustachian tube, and middle ear of the right side. Headache and sleeplessness came on as the result of suppuration in the mastoid region. The mastoid itself was sclerosed, but the abscess communicated by a small fistula with the interior of the skull. The opening was enlarged, but the patient died of meningitis. *Post-mortem* there was found an opening in the tegmen tympani, communicating with the antrum, which was carious and full of granulations, the tympanum proper being unaffected. There was pus on the upper surface of the petrous bone and in the posterior cranial fossa.

The second, a workman, aged fifty-two, had right otitis media without suppuration after influenza. A painful swelling developed behind the right ear and the mastoid was trephined. In the temporal fossa the dura

mater was exposed by necrotic caries ; suppuration extended backwards and downwards, and recovery appeared to take place, but two days before the intended dismissal sudden loss of consciousness, with high fever and meningitis, came on with a fatal issue. On section there was found a considerable collection of pus in the right middle and posterior cranial fossæ, and in the temporal fossa cicatrized caries. Owing to a mistake on the part of the dissector, the connection with the temporal bone was not made out.

Dr. HESSLER (Halle).—*On Extra-dural Abscesses following Otitis.*

The subject has been thoroughly described by Heinecke. Hoffmann found in 102 fatal cases of ear disease that the dura mater was exposed 34 times. Hessler in nearly 100 gougings of the mastoid found the dura exposed 17 times, and in 13 of these the patients recovered.

Hessler on searching the literature of the subject has collected 50 cases of extra-dural abscess, and adds to them three of his own. They were equally divided as regards side, but twice as often in males as in females, 30 times in chronic and 19 times in acute affections, and most frequently between the ages of 1 and 25.

He distinguishes *secondary* forms with bone-defect from *primary* forms without. The secondary were most frequent, occurring 41 times to 12 of the primary. The secondary abscesses were situated four times as often on the posterior surface of the petrous bone as on the tegmen tympani. The extent of the caries varied very much. Recovery took place after operation in 14 cases. Death occurred most frequently from cerebral abscess, then from meningitis, further from cerebral (? cerebellar) abscess and sinus phlebitis.

Hessler collected 12 cases of primary extra-dural abscess, including two of his own, which resulted from acute otitis and recovered. They were mostly on the posterior surface of the petrous bone, being twice as often there as on the tegmen. Three cases recovered. Death was generally due to meningitis. In eight of the cases the left ear was affected, and the patients were males.

It is impossible from these cases to make a definite description of the disease. The diagnosis cannot be made absolutely unless a fistula in the bone leads directly into the abscess, and is to be arrived at with probability by the exclusion of meningitis, sinus phlebitis, and cerebral abscess. The treatment is prophylactic and later purely surgical. Prognosis depends on the condition of the dura mater and the early adoption of treatment.

Dr. BRIEGER (Breslau).—*Demonstration of an Apparatus for procuring Germ-free Water for Syringing.*

A Berkenfeld filter in a metal cylinder is attached to the outflow pipe of the syringe. This cylinder and the point of the syringe have to be sterilized by boiling. Sterile water was obtained even when a copious supply of a pure culture of staphylococcus pyogenes aureus had been previously mixed with the water with which the pump was charged. The apparatus diminishes the force of the steam only to a small extent.

The Session was then formally brought to a close after the appropriate votes of thanks had been given. The next meeting takes place at Nürnberg.

Dundas Grant.

THE SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY, OF PARIS.—*Continued.*

Meeting, December 4, 1891.

Ménière's Vertigo—Pulsations demonstrated by the Endoscope indicating Otitis.
By Dr. GELLÉ.

From the characteristic nervous symptoms there is an easily intelligible tendency to regard the affection as of neuropathic origin, or secondary to a gastric disturbance, especially when succeeding the ingestion of food, or followed by nausea and vomiting. The stomach is treated, and the symptoms cease, then recur; then after some months complete deafness or noises in the ears draw attention to these organs. An incredible number of people are treated for gastric disorders, dieted, or sent to Vichy, and a couple of years later come to be treated for deafness more or less complete. The gastric attacks have yielded to treatment, while the ear, which has been forgotten, has become deaf. The state of the stomach, as well as of the circulation and the respiratory organs, has its influence on the symptoms due to aural affections. What are the signs which would lead to the inference that the ear has anything to do with the condition?

Some are very clear, such as vertigo, the special cerebral disturbance, provoked by centripetal pressure¹ in one ear of the vertiginous subject, but this is not constant, any more than is the vertiginous sensation caused sometimes by Politzerization, which has a certain value in such cases. Besides the objective symptoms, often very difficult to recognize, or without significance for the actual disorder, because they indicate a sclerosis or old lesion of the tympanum, there may be observed in certain cases pulsations in the endoscope,² which leave no doubt of active fluxion, and perhaps also of vascular proliferation in the cavity of the middle ear, masked by a tympanum without any characteristic appearances, or with such as would only lead to error. The following case is a demonstration of the use of the endoscope, not only as a manometer indicating the movements of the tympanum and their extent, and its elastic return, spontaneous, or due to deglutition, but manifesting also the pulsations of a vascular mass, or total fluxion of the tympanum.

Now, in presence of the syndroma of symptoms, such as vertigo, falling, nausea, etc., it is obviously of interest to find that there exists a lesion of the middle ear which may perhaps explain all the accidents. When these pulsations are clearly shown on the endoscope no further proof is necessary. In spite of the coincidence of gastric, circulatory, or neurasthenic symptoms, it is important to recognize that an aural condition exists, which is of prime importance.

Case I. (February 15): A man, aged forty-five, worker in boilers for steamboats, etc., worked always in confined space, and when perspiring was accustomed to go out into a current of very cold air. He was also bronchitic and emphysematous, and short of breath on walking, deaf for a long time, and had, since September,

¹ Gellé's experiment, in which the air in the ear is compressed by means of an air-ball with a tip fitted tightly into the meatus.—[Ed.]

² Gellé's "endoscope" consists of a fine manometer, of which the proximal short arm is bent and fitted tightly into the auditory meatus, while the distal long arm is vertical, and of much narrower bore. A little water is placed in the bend, and any pulsations communicated to it are much magnified in the narrower arm of the instrument. By its means Dr. Gellé professes to have detected congestive conditions in the middle ear which were not perceptible by other methods of examination.—[Ed.]

chronic cough, attacks of which gave him headache and vertigo. In October he had cold sweats, staggering gait as if in liquor, and falling, with loss of consciousness, symptoms which he had had many times before in September, but without falling. In two or three seconds he recovered. The right ear buzzes continually, and pulsates like the heart beat. A watch is heard only on contact, and very well on the mastoid apophysis and the forehead. "Trans-auricular auscultation"¹ pretty good. By the endoscope, absence of movement is found on Valsalvan inflation, and pulsations are absent. (He takes 0.60 centigrammes of quinine a day.) The pharynx is covered with large granulations covered with adherent exudation. The second sound of the heart very much intensified. In the left ear the watch is perceived at twenty centimètres, and very well on the cranium. The right tympanum is smooth and clear. After a partially successful Valsalvan inflation there are seen radial folds, and such bulging of the membrane and relative retrocession of the manubrium as would be seen in great relaxation. A few days later Politzerization succeeds, and the bulging of the membrane forms two cheek-like protuberances, with a furrow containing the manubrium between them. On deglutition with closed nostrils complete subsidence takes place. There is then observed on the membrana tympani, at its lower part, an oblong prominence of a dull white tint, and more opaque than the rest. This disappears on inflation. On March 1 endoscopic examination gave evidence of free mobility of the drum-membrane and distinct pulsations. Otherwise there was no improvement. There was very loud tinnitus, cardiac pain, and tendency at times to fall, but no violent seizures. The patient had taken a second course of quinine for ten days. Headache was persistent, and increased by coughing. Air douches and throat fumigations were practised. On March 15 there was constant frontal headache, and at times attacks of tinnitus, but no severe vertigo, transient confused sensation, improvement as regards cough and throat. The watch was heard at four centimètres, and also plainly in contact with the cranium. The patient's general condition was nearly normal. The vertigo did not recur, but a slight catarrh of the left ear, of short duration, was induced somewhat later by exposure to cold.

In such a case the negative appearance of the tympanum would lead to the overlooking of the aural lesion. There was no otalgic pain, and the frontal headache with vertigo and reeling gait would have suggested a cerebral congestion in presence of the cough and emphysema. The pulsation communicated to the fluid in the endoscope established the diagnosis of vertigo due to disease of the ear.

In the following case, the presence of a plug of cerumen in the good ear, with recent deafness, diverted the attention from the really affected one.

Case II. : A ruddy, vigorous man of forty-nine years of age had had syphilis at twenty-three, but enjoyed habitual good health.

For seven or eight years, he had from time to time been attacked with palpitation, shortness of breath, and throbbing in the head and temples, with oppression at the stomach so severe as to oblige him to go to bed, especially in cold weather.

Two and a half months ago, in consequence of severe cold, he had an attack of bilious vomiting in the night, and on waking was confused and unable to stand, with deafness in the right ear. There were no buzzings, but very rarely a slight squeak in the ear. The vertigo and head-trouble lasted fifteen to twenty days. He had never suffered with his ears. His left ear was quite good, but had been getting a little dull. In the left ear, there was a plug of cerumen, but it left sufficient space to let it be seen that the membrane was dry and indrawn. On removal of the cerumen, a watch was heard on the left side at fifty centimètres.

¹A tuning-fork vibrating on the vertex is heard by the observer by means of an otoscope in the patient's ear.—[Ed.]

The right ear was deaf; the watch being heard neither in contact with the meatus, nor on the mastoid, though well heard on the forehead. The Eustachian tube was closed. Politzer unavailing. The catheter would not pass more than one centimètre. Under cocaine and nasal douches it was possible, after a few days, to inflate the tympanum with immense benefit to the headache and confusion, and with cessation of the giddiness.

In this case it would have been supposed that the disease was centred in the labyrinth had not the endoscope shown pulsations synchronous with the heart-beats. The deafness persisted in spite of treatment. There can be no question in view of this and other circumstances—suddenness, etc.—that there existed simultaneously with the median otitis a labyrinthine affection.

At a later date, a fresh catarrh attacked the throat and right ear, but without much vertigo. The ear recovered, but with only amelioration of the hearing-power.

Probably in many cases of vertigo, the aural lesion is deep and limited, being situated round the fenestra ovalis, near the facial nerve. It is only by later extension that the membrana tympani becomes affected.

The latter of the two cases illustrates the evolution of a specific parotitis—middle ear and labyrinth—causing disturbances of cerebation and equilibrium, with very little visible objective change. The endoscopic pulsations, however, demonstrated the participation of the middle ear, as did also the relative improvement afforded by the air-douche. We have therefore a valuable means of diagnosis by which the treatment and prognosis are materially modified.

M. LOEWENBERG: Congestion of the middle ear is a factor quite apart from “Ménière’s disease.” A different title might have been adopted.

M. POTIQUET was afraid that Dr. Gellé, in looking upon the endoscopic pulsations as a certain sign of latent intra-tympanic congestion, had been led into an error of interpretation. He himself had substituted ether for water in Politzer’s manometer, and had, even in an absolutely healthy ear, observed oscillations isochronous with the pulse. He attributed this, too, to the pulsation of the arteries in the walls of the meatus and membrana tympani, and to impulses communicated from the neighbouring vessels.

M. GELLÉ stated that he published a work on this subject seventeen years ago, and that he considered the use of ether as leading to error. He thought it very difficult to experiment on one’s self, and that one experiment was insufficient to found on.

M. POTIQUET thought he had avoided all sources of error.

The Society then elected M. Loewenberg Vice-President for 1892, and re-elected MM. Marage and Ménière to their offices of Annual Secretary and Treasurer.

Glandular Retention Cysts of the Anterior Part of the Nasal Fossæ. Two Cases by HENRI CHATELLIER.

Madame de X., fifty-five years of age, presented a tumour of the right lateral region of the nose, raising the skin of the ala of the nose and extending outwards towards the malar bone, and being regularly rounded. Palpation showed it to be painless, and non-adherent to the skin, which kept its normal colour. The tumour was seen on the internal surface of the ala, jutting into the vestibule and reaching to the anterior extremity of the inferior turbinated. Seized between the thumb and finger, the one in and the other outside the nasal cavity, the tumour was found to have the size of an almond, of firm and slightly resistant consistence, as if filled with fluid. The coverings of the vestibule and inferior turbinated did not appear to be altered, either in colour or shape, and the mass was not adherent to the bone, upon which it could easily be displaced. There were no general

symptoms, fever, or pain. Though the presence of the tumour had become visible to the patient only fifteen days previously, when it began to increase in size, the patient could not fix the date of its commencement. Its round form, independence of the bony framework, and consistence, caused the author to think it to be a cyst developed at the expense of one of the glands of the nasal mucous membrane. An exploratory puncture was recommended, and the patient agreeing, it was operated upon on January 16, 1888. The parts were first cleansed with wads soaked in Van Swieten's liquor, and cocainized, and the tumour then punctured on the internal nasal surface with a sterilized Pravaz syringe. Two cubic centimètres of viscous, lightly brown fluid were withdrawn and preserved for histologicobacteriological examination. The surface was then washed with a wad charged with fluid, and the tumour had completely disappeared. Next evening there was commencing erysipelas of the right naso-labial furrow, but no fever. This attack lasted four days, was very mild, invaded only a portion of the corresponding cheek, and produced no general symptoms. When this disappeared the tumour commenced to reform, and in fifteen days had attained its former size, so that the patient wished for further operation. It was, however, allowed to discharge for a month before operating again.

At the second operation, after cocainizing and vigorous antiseptics, an incision in the convex surface formed by the tumour in the nasal cavity was made with the galvano-cautery, as little heated as possible. At a depth of two millimètres the cavity of the cyst was reached, and yellowish, muco-purulent liquid was discharged. The cautery was applied to all parts of the cyst, and it was dressed with iodoform gauze. There were no complications, the wound cicatrized rapidly, and three weeks after there was no trace of the operation, except for a slight depression a little in front of the anterior extremity of the inferior turbinate. The tumour did not recur. A year and a half after, the cure was maintained. Histologically, the liquid viscid, composed of mucous and containing numerous pus globules. Bacteriologically, numerous chains of streptococci were seen, and were also cultivated on gelato-peptone.

Madame X., thirty-two years of age, presented a small tumefaction, which had arisen between the nose and the right cheek. It gave no pain, but she became alarmed at its increase of size. It formed an ovoid mass, as large as an almond, under the skin, which moved freely over its surface, and was unaffected. The tumour projected into the interior of the nasal cavity, depressing the skin of the vestibule, and effacing the concavity of this region. Being freely movable, excluding the idea of a growth from the maxillary bone, also of firm consistence, but not that of a solid body, the diagnosis was made of glandular cyst. Antiseptics by liquor Van Swieten being obtained, puncture was made with a sterilized Pravaz syringe, and one and a half cubic centimètres of muco-purulent, thready and yellowish fluid were withdrawn. One and a half cubic centimètres of liquor Van Swieten was injected and withdrawn. This was repeated several times, until the fluid withdrawn was normal. Tampon of iodoform gauze was inserted, so as to fill the whole vestibule. No complication occurred, and the cyst did not refill.

MARTIN had seen a similar case, the cyst being in the left nostril, and simple puncture produced cure without recurrence.

CARTAZ remarked that these cysts are very rare, a few such cases having been reported. Their pathogenesis is very interesting. Cysts of the middle turbinate are the most frequent, but when situated in another region their mode of development is not intelligible.

CHATELLIER remarked that some invariably owe their origin to obstruction of a gland duct, but in other instances the explanation cannot be given.

RUAAULT remarked that tumours having the appearance of cysts are often met with.

LOEWENBERG thought Chatellier's communication very interesting, but it was curious that a pouch containing streptococci and pus should not lead to any general symptoms.

POTIQUET thought that ampullary dilatation of the osseous middle turbinated, to which allusion had been made, never results from a pathological process. It is rather an anomaly of development, a reversion explained by pathological anatomy. This would arise especially in an organ affected with morbid alterations; the mucous membrane clothing the dilated anterior extremity of the middle turbinated, more exposed by this fact to noxious influences, would inflame more easily, and that will be the pathological condition.

GOUGUENHEIM said that one might ask the difference between a cyst and an abscess, as the time when the cyst first showed could not be determined.

CHATELLIER replied that there was much mucus, the liquid being brown, and not yellow like pus.

GOUGUENHEIM: Hæmatomata at the end of a certain period do not always contain blood—that is why it is unfortunate not to know if in such a case there had not been a traumatism.

Note on the Treatment of Catarrh of the Pharyngeal Tonsil, and particularly the circumscribed form called "Tornwaldt's Angina." By Dr. ALBERT RUAAULT.

The appearance of Tornwaldt's memoir in 1855 on "Catarrh of the Bursa Pharyngea" was, as is well known, the occasion for many anatomical and clinical works on the same subject. It will suffice to recall that the result of these researches, though appearing to invalidate the opinion of Tornwaldt as to the anatomical site of the affection which he has described, confirms partly his clinical observations, by establishing the existence of a circumscribed variety of naso-pharyngeal catarrh presenting a certain number of special characters, rebellious to old methods of treatment, and which yield only to local intervention methodically applied. However, all who have had occasion to observe Tornwaldt's angina are at one in stating that in such cases the results of the most persistent local treatment are very variable. It is reasonable to enquire if these rebellious cases do not owe their tenacity to some unknown anatomical peculiarity, rendering the seat of the disease more difficult to instrumental and other treatment. This hypothesis is the more legitimate, since up to now control of clinical observation by autopsy has always failed, anatomical researches upon this subject having always been conducted in the dissecting room. I should, however, state that the special pathologico-anatomical point, the observation of which in a certain number of persons has conducted me to the operative procedures which I shall presently discuss, is sufficiently known.

It has been described in an interesting work by Potiquet on the anatomy of the pharyngeal tonsil. He related a case where on dissecting a subject in whom the fusion of the folds limiting the median cleft of the pharyngeal tonsil through a certain extent of the borders had led to the formation of a pouch or *cul-de-sac opening in front*. But this condition, which in the dissecting room is exceptional, appears to me to be pretty frequent in patients presenting the signs of Tornwaldt's angina.

In order to observe it upon the living subject it is indispensable to take special precautions.

The ordinary naso-pharyngeal probe is not suitable, since if under control of the mirror its extremity is introduced into the vulvar orifice of the median cleft,

which is visible by posterior rhinoscopy, this extremity directed upwards, does not penetrate it, and leads to the belief that there is a simple recess without depth. If on the contrary the naso-pharyngeal portion of the probe is curved in a U shape, so as to give it the form of a hook, with a small branch looking downwards and a little backwards, and having a length of five to six millimètres, it is possible, under control of the mirror, with the instrument guided from before backwards on the vault in the median line, to enter the orifice from before backwards, and from above downwards, and to make the curved branch of the instrument penetrate easily in all its length. It is easy to see then by exercising traction upon the probe that this solidly rests on a solid fold, and the resistance offered by the mucous membrane is often astonishing, and similarly so is the effort which tearing necessitates, or more accurately speaking, the scission of the anterior wall of the cavity in which the instrument is engaged. To give an instance, it will suffice to say ordinary German silver probes do not permit of exact application, because not only does their great curve elongate, but their extremity partly straightens, and often escapes without the tissues yielding. It is necessary to employ a more rigid instrument of iron or steel, in which the small branch of the hook and its concavity are a little compact and not yielding. It is then sufficient to apply the hook with a firm hand, and to carry it quickly forwards and downwards (in relation to the patient), that the shock may lead to the rupture of the anterior wall of the *cul-de-sac*, throughout its extent, and without much pain. I cannot easily explain the marked resistance I have met with so often at this part of the pharyngeal mucosa, for generally the tissue of the pharyngeal tonsil preserves during retrogression a comparative friability. I am then obliged to make some reservations as to the exact seat of the pouch where the short branch of the probe penetrates, and I do not dare to affirm that this cavity is always intra-tonsillar, as in the case described anatomically by Potiquet. However that may be, scission thus practised, followed by curetting, and cutting of its free edges with a cutting curette, like Sim's uterine or Heryng's laryngeal curettes, then local cauterizations with iodine or strong carbolic solution, lead to rapid and excellent results, in cases where until then I have only obtained transitory improvement. Where there is a posterior inferior opening, *cul-de-sac* scission should be practised in the same manner. At the end of about a week the affected region presents the appearance of median cleft, where the mucosa, red and soft, is no longer covered with muco-pus or crusts as before. If the catarrh has many seats of origin, scission of the median recess does not suffice. The operator should endeavour to break down, with a suitably curved rigid probe, the tracts and bridles of tissue of the lateral regions of the pharyngeal tonsil and the walls of its various anfractuosities. This done, it is easy with the cutting curette before mentioned to detach the *débris* now only partially adhering to the subjacent tissues.

Topical applications are easily made, and the most rebellious forms of the condition rapidly submit to improvement.

It is quite intelligible that catarrh of the pharyngeal tonsil should be cured by scission. Lacunar catarrh of the tonsil is thus cured promptly and easily, even when honeycombed with deep follicles; and *à fortiori* catarrh of the pharyngeal tonsil, localized in the crypts, anfractuosities, and *cul-de-sacs*, resulting from pathological adhesions between the surfaces, which in the normal state limit clefts largely open, should be similarly benefited by the destruction of the furrows, whose walls are manifestly the origin of the secretions in this affection. Curettage without scission often fails; and the galvano-cautery and chemical caustics are not satisfactory. After scission, however, complementary measures act rapidly and well. I am speaking in this place only of those cases in which the retrograding

pharyngeal tonsil does not cause a tumour. In cases where there is a tumour, ablation is, of course, the first indication; but in cases where there is not any, or no more tumours, I cannot subscribe to the opinion of M. Chatellier, who recommends radical ablation of the parts with cutting forceps. "These anfractuosités and these edges," writes he, "are commonly of a lively red colour; they are the seat of a chronic inflammation impossible to cure, unless they are destroyed by forceps, which, so to say, cures the pharyngeal surface." In my experience the matter is not so simple, and in the immense majority of cases it would be necessary, if we wished to destroy all, that there should be many applications of forceps, and still it would be difficult to avoid removing too little at certain points, and too much at others; and, lastly, there would be danger of hæmorrhage, primary and secondary, of which it is never possible to foresee the imminence or gravity. I do not desire to extend this note by adding cases. Though I might relate some cases of rapid cures, I do not dare yet to say that they are definite. My object in publishing these notes is to direct the attention of my colleagues to control themselves the assertions here set forth. Finally, I would insist on the necessity of practising scission of the pharyngeal tonsil, and even curetting or swabbing, only under the control of the mirror, and when the patient can support the palate hook, tongue depressor, etc. If these operations are done in the dark, it will not be fair to attribute the poor results obtained to the inefficacy of the method recommended by this note.

Meeting, January 8, 1892.

Note on the Treatment of Pharyngitis of the Vault, or Tornwaldt's Angina.
By Dr. LUBET-BARBON.

In reference to M. Ruault's communication, I will remark that it is very difficult to practise scission of the pharyngeal tonsil, and, further, that I am in accord with his own words, and see why this is difficult; moreover, it is not of much use to perform it.

The disease in question is characterized symptomatically by flow of mucopurulent secretion coming from the vault of the pharynx, and anatomically by lesions of the pharyngeal tonsil. If one examines the vault in these cases, it is seen that hyper-secretion occurs at points well determined by antero-posterior clefts, more often median (*recessus medius*), sometimes lateral (*recessus lateralis*), but that the tonsil is oftenest not developed—there exists only a vestige of adenoid vegetations; the lesion is entirely intra-mucous, and if a curved probe is introduced into these recesses it is found that there is often a very considerable depth—sometimes one to one and a half centimètres; it is the mucous membrane covering these *cul-de-sacs* from which proceeds the secretion; it is, therefore, not, in my opinion, with a parenchymatous affection of the tonsil that we have to do, but simply with a superficial lesion of the mucous membrane. To excise it is to seek the tissues round the cavity, to endeavour to tear an indurated tissue, retracted and fibrous; it is, moreover, more easy to detach the whole mucous membrane with a crotchet than to make a tear across it. It is the mucous membrane which secretes so abundantly, and it is thickened like the uterine membrane: it is by curettement that the diseased portions can be removed in both cases, and this is the proceeding I adopt. I for a long time used the curette introduced by Kafemann; now I prefer to employ an instrument of which the idea was furnished to me by the gynecological curette; it is composed of an elongated ring, one border of which is soft, the other cutting, and the shank, the important part, is made of steel, so tempered that it can be bent at will, and more or less according to the depth or extent of the bursa to be curetted.

The palate retractor being in place, the curette is introduced into the recess under guidance of the mirror, the cutting edge turned backwards, and by to and fro movements the whole cavity is scraped throughout its depth. Shreds of hypertrophied mucous membrane fall, of a thickness of one to two centimètres, soft and whitish; these fall with the blood upon the mirror placed below them, which interrupts the operation for an instant.

Wads of absorbent cotton control the blood, which flows into the pharynx, and when the cavity is free from bleeding a *porte-caustique*, with nitrate of silver, is introduced into the interior. The operation is generally not painful; inflammatory reaction follows, lasting for three or four days; the more abundant secretions carry away with them portions of the cauterized tissues, and a second curettement is rarely necessary. It is sufficient to make a second application of silver stick fifteen days after the first. To relieve consecutive inflammation a twenty per cent. solution of mentholized olive oil is employed for swabbing.

RUAULT remarked that he had found caseous matter in this pouch. There are some patients who are cured immediately; others who present recurrences. The question is not completely elucidated.

GELLÉ said that two years ago he had presented a characteristic anatomical specimen.

On the Frequency of Latent Bilateral Empyema of the Antrum of Highmore, and the Necessity of Methodical Exploratory Irrigation of this Cavity in Cases of Nasal Blennorrhœa. By Dr. LICHTWITZ (Bordeaux).

Almost all authors say that a bilateral affection of these cavities is rare, and looking through the numerous published observations very few cases are indeed found. It is only Ziem, Kaufmann, and we ourselves, who have reported many of these cases on the living subject, and Gradenigo on the cadaver.

Thus in Ziem's first publication¹ on this subject, in 1886, out of twenty-five cases of nasal blennorrhœa there are only eight cases of bilateral empyema of the antrum.

In Kaufmann's work,² of thirty-six cases of empyema which he communicates, there are only thirteen cases of bilateral empyema.

Gradenigo,³ who examined the sinuses of three hundred cadavers, found nineteen cases of empyema of the maxillary sinus, of which six were bilateral.

We ourselves, in our work on the diagnosis of latent empyema of the antrum by exploratory irrigation,⁴ related, amongst fourteen cases, four cases of double empyema, and we described the most striking of these cases.⁵ Since then we have observed eight other cases. Twelve bilateral cases we have compiled from forty cases of abscess of the antrum, or a proportion nearly of one case of bilateral to three of unilateral empyema.

If we seek the reason why most authors have recorded very few cases of bilateral empyema, and others have recorded them comparatively often, we find it in the obscurity of the symptoms of this affection, and in the absence of methodical examination of the maxillary sinus. This examination consists in making an exploratory irrigation of the antrum in each case of nasal blennorrhœa, however slightly we may suspect it to be affected.

In cases of unilateral empyema, when the unilaterality of the symptoms strongly arouses suspicion, exploratory irrigation is useful only to give the last confirmation of the diagnosis, in order to avoid a large useless opening into the antrum, and

¹ Ziem, "Monatssch. f. Ohrenheilk." Nos. 2, 3, 4. 1886.

² Kaufmann, *ibid.* Nos. 1, 8. 1890.

³ Gradenigo, "Annales des Mal. de l'Oreille," &c. No. 8. 1891.

⁴ Lichtwitz, "Bulletin Med." No. 86. 26 Oct., 1890.

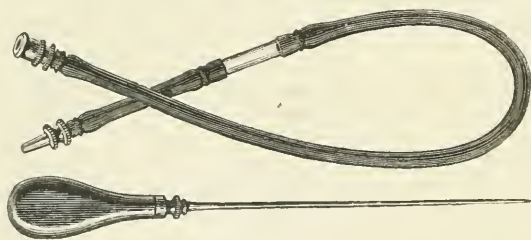
⁵ The other cases were included in Jeanty's monograph, "De l'Empyème latent de l'Antrum d'Highmore," &c. Bordeaux. 1891.

also to demonstrate to the patient the necessity of intervention. In empyema of both antra, on the contrary, where the bilaterality of the symptoms would cause one rather to think of a general affection of the nasal or retranasal mucous membrane than of a localized focus of suppuration, the direct research of the pus is the only means of diagnosis.⁶ In fact, Ziem, Kaufmann, and ourselves owe our cases of double empyema of the antrum to methodical exploration of this cavity which each of us has made by a different channel.

Ziem, who first suggested methodical exploratory irrigation, thanks to which he was enabled to demonstrate the frequency of empyema of the antrum in the absence of the classical symptoms, practises it through an artificial orifice in the alveolar arch.

Kaufmann irrigates through a canula introduced through the natural or accessory orifice, according to the method employed by Hartmann for the treatment of abscess of the antrum.

We ourselves reach the antrum through a puncture of the nasal wall of the antrum in the inferior meatus by means of a thin straight trocar⁷ (see figure) after



the manner we described in our first work on the subject. This process is, in fact, only the operation in miniature which Miculicz performs at the same place with his lanciform perforator, Krause with his large trocar, and Tornwaldt with his trephine in order to open the sinus largely for the treatment of empyema by this channel.

We have in the work mentioned previously already mentioned the reasons for which we prefer exploratory puncture through the inferior meatus to that made through the alveolar arch, and washing through the natural or accessory orifice, or rather by an artificial orifice created in the infundibulum. Dundas Grant,⁸ who lately spoke of our method of exploration before the British Laryngological and Rhinological Association, said :—"Nearly always the diagnosis of empyema is a 'little uncertain, until exploratory puncture has been made ; that is a point upon 'which all conscientious observers will agree with me, I think.' And after describing the details of the method, he adds that by this simple manœuvre we can give the patient, before leaving our consulting room, a convincing proof to encourage him to submit to the classical operation of Cooper. The author recalls a certain number of cases observed by him where the adoption of exploratory irrigation had been extremely useful.

⁶ If certain authors such as Walb (Bonn, 1888, p. 9) and Lennox Browne in the discussion which followed the communication of Dundas Grant upon our method of irrigation (*JOURNAL OF LARYNGOLOGY*, p. 427, 1891), say that they have always found pus in the antrum when they had suspected it, it does not follow that many cases may not have escaped them in which there was pus without their having a suspicion of it. They have probably only operated upon patients in whom the diagnosis according to known facts was nearly quite certain.

⁷ It can be obtained from R. Mattieu, 13, Boulevard Saint-Germain, Paris.

⁸ Dundas Grant on "Lichtwitz's Method of Exploratory Puncture and Irrigation of the Antrum through the Inferior Meatus." *Brit. Laryngol. and Rhinol. Assoc.*, Nov. 27, 1891; *JOURNAL OF LARYNGOLOGY*, Dec., 1891, No. 12.

At the present time, basing ourselves upon a more extensive experience, for we have already made one hundred and eleven punctures, we can still more warmly recommend this mode of investigation, which has rendered us the greatest service, especially in seeking for double empyema. In forty-three cases irrigation gave a positive result. Sixty-eight times the injected antiseptic liquid returned quite clear. The forty-three positive punctures were in thirty-one patients, of whom twelve had double empyema.⁹

Among the cases quoted by us in our first statistics it happened that in four we could not pierce the nasal wall of the antrum; since that time this has only occurred once in a patient who must have had a rudimentary antrum, since puncture through the alveolar arch had been equally impossible, although the drill had been buried to a depth of about two centimètres.

In two other patients—a woman of twenty-seven and a man of sixty—we were obliged to abstain from terminating the puncture. The woman was taken with a convulsive crisis, probably from touching a spasmogenic zone, and the man became ill.

Formerly we caused irrigations of the nasal fossæ, to expel pus therein, to be made before puncture, but since we have found that these injections can cause the emptying of pus from the antrum, and thus annul the result of the exploratory irrigation, we only cleanse the parts with a wad of cotton on a probe. Puncture is only slightly painful in most cases, and we often do it without local anaesthesia. We have never seen any notable hæmorrhage. Patients whom we have interrogated after the puncture state that they have never felt any kind of pain or malaise.

A priori, the harmlessness of puncture is foreseen, for the mucous membrane of the antrum is in direct continuation with the nasal fossæ through its natural opening, and consequently with all the microbes which reside there, and, even neglecting the most elementary laws of antiseptics, it would be difficult to admit that a capillary puncture could have any harmful consequences. A curious thing is that many patients, in whom we have punctured and washed out the maxillary sinus without finding pus, distinctly state sensible and lasting amelioration of the hyper-secretion and of the catarrh for which we had believed it necessary to explore the cavity. Another patient from whom we had removed a number of polypi, and who returned to us in fear of having them recur, because fifteen days before she had felt a tickling in the nose, sneezed without cessation, and saw continual flow of clear liquid from the left nostril. Puncture of the left antrum immediately caused the arrest of tickling, rhinorrhœa, and sneezing. McBride¹⁰ records two similar cases in which exploratory puncture, although with negative result, was followed by disappearance of the symptoms complained of. We only relate two cases from our twelve cases of double empyema, in which bacteriological examination was made of the pus.

Case I. (*continued*): Mme P., fifty years old, constant need of handkerchief, especially to left side of nose, for about seven years; coryza and bad odour in the nose. Treated for four years by a specialist, who removed some polypi, and made numerous cauterizations. The second upper right premolar and first large molar of the left side were absent. Illumination by transparency showed the left side cheek to be clear, and the right side dark. Exploratory puncture of each side through the inferior meatus caused foetid pus to be discharged.

M. Sabrazis, *interne*, found in the pus of the left side streptococcus pyogenes in very great number, almost to the exclusion of any other microbe. That of the right side contained chains of streptococci less numerous, together with various microbes.

⁹ In nine other patients diagnosis was made four times by irrigating through an alveolar fistula, or after the extraction of a carious tooth, the root of which communicated with the antrum (four times), or by capillary puncture through the alveolus of a tooth (one case).

¹⁰ McBride, "Deutsche Med. Woch.," Feb. 5, 1891, No. 6.

Both antra were opened in October, 1881, by Cooper's method, and washed out every day with boracic water. Objective symptoms disappeared, and at the end of two months the antra secreted only very little.

Case II. (*continued*): Mme. Ch., fifty-six years of age. For at least ten years constant wiping of the nose, especially the left nostril. Cacozmia at times; the three right molars, and first left premolar absent. Congestion of the chest—left side—in 1889. Treated with Weber's douche for some years. No nasal lesion, nor mucus in the middle meatus. Both sides of the face very transparent to Heryng's illumination. Exploratory puncture causes discharge of foetid pus from both sides. That from each antrum contains a great quantity of lanceolated diplococci, with the objective characters of the pneumococcus of Talamon-Fraenkel. On 12th December a large opening by Cooper's method made into the right antrum, and three days after into the left antrum. Boracic injections and applications of pencils of tannin, seven per cent. At the end of December no further need for the handkerchief, but injection of the antra still yields some flakes of pus.

The recognition of bilateral empyema will perhaps throw some light upon the etiology of this affection. A nasal origin is more probable than a dental origin, and the coincidence of affection on both sides would be best explained by the same morbid process of the nasal mucosa.

Luc,¹¹ endeavouring some months ago to elucidate the etiology by the foetidity and bacteriological examination of the pus, concluded that in empyema of dental origin there is foetid pus containing various microbes, whilst in empyema of other origin there is non-foetid pus containing exclusively streptococci. We do not believe that the foetidity of the pus can be taken as an important etiological factor. It seems to us to depend upon the length of sojourn in the antrum. In the same patient and the same antrum we have observed, at different times, sometimes non-foetid muco-purulent secretion, and at other times flakes of foetid pus, just according to whether the pus flowed more or less easily from the natural orifice.

It is sufficient very often to remove some small polypi from about the hiatus semilunaris for the pus to lose its foetidity. The results obtained bacteriologically by Sabrazis in Pitres laboratory do not appear to us to confirm Luc's opinion. The pus of the left antrum in our first case, also that from a case of unilateral empyema, although it was foetid, contained pure cultures of streptococci, and the pus from each antrum of our second patient contained large quantities of pneumococci.

More numerous observations are required, but, whatever the etiological rôle of the bacteria, they have an importance from the point of view of complications. Thus the occurrence of the streptococcus, which Luc was the first to mention, and of the pneumococcus as occurred in our second patient, in the antrum, render intelligible those frequent complications of empyema of the antrum, to wit, erysipelas of the face, abscess of the eyelid, peritonsillitis, which Ziem has recorded, and pulmonary complications, of which we have related an example (*loc. cit.*).

We believe that in Luc's case erysipelas of the face was rather the consequence than the cause of the empyema by streptococci.

The prognosis of double empyema appears to us more grave than that of unilateral empyema—indeed, two only of our twelve patients have been cured; seven patients, though improved, are still under treatment—one for sixteen, the other for twenty months; one patient has not yet decided upon operation; another has been lost to observation; a third has died from a cardiac affection.

As to treatment, we do nothing more than Cooper's operation, which permits the patients to look after themselves. For two months we have successfully

¹¹ Luc: "A Case of Empyema of the Antrum of Highmore due to the Streptococcus of Erysipelas." *Archiv. Internat. de Laryng., Rhinol. et d'Otologie*, March and April, 1891, pp. 73-80.

employed medicated pencil (iodoform, tannin, &c.). They are more convenient than insufflations of powders, or injections of antiseptic or concentrated astringent fluids, for they can be introduced by the patients themselves, a fact which is not to be under-estimated in an affection which is often very rebellious.

Thanks to exploratory irrigation, no matter by what method, the diagnosis of empyema can be made in a certain manner, in each case, however little suspected.

When inoffensive and certain methods will have been devised of exploration and opening the other accessory cavities of the nose as easily as the maxillary sinus, the galvano-cautery and Weber's douche, those panaceas for the routine practitioner, will no longer play so great a part in the therapeutics of nasal affections.

Nasal blennorrhœa will then figure no more in rhinological treatises as a morbid entity, but will serve only to designate a symptom common to different nasal affections, and especially to empyema of the various cavities of the nose.

A Case of Acute Rheumatic Crico-arytenoid Arthritis. By Dr. LUC.

On November 30th last, I was asked by my friend, Dr. Rogrou, to examine the larynx of M. W., a man about thirty, affected for eight days with alarming dyspnoea, which the absence of pulmonary affection and the coincidence of pronounced stridor easily permitted us to refer to the larynx.

On the 19th November the patient was taken at Tours with fever and pains in the joints of the lower limbs, making walking extremely painful and almost impossible. After taking three grammes of antipyrin and one gramme of quinine the joints were next day less painful, but the throat was affected. During the night of the 20th there was intense fever and nightmares, recurrence of pain in the legs and in the wrists. Returning to Paris, Dr. Dargent diagnosed the attack to be influenza with rheumatic manifestations. On the 25th and 26th the joints were less painful, but pains in the throat increased, and were especially evoked by movements of deglutition; they also began to be accompanied with dyspnoea and stridor. On the 28th and 29th the laryngeal symptoms increased in intensity and there was slight catarrh. The next day I made a laryngoscopic examination with the following results:—

Epiglottis intact. Slight congestion of the vocal cords, enormous swelling of the left crico-arytenoid region, forming a rounded tumour of the size of a nut, which encroached considerably upon the laryngeal vestibule, and was the main cause of the dyspnoea; but it was easy to see that this was increased by the absolute immobility of the left vocal cord and the arytenoid of the left side. I made a diagnosis of *rheumatic arthritis of the left crico-arytenoid* and after giving a cocaine insufflation, I prescribed daily three grammes of antipyrin and two grammes of iodide of potassium, and tincture of iodine to be applied to the front of the neck as a revulsive. On the 2nd December the throat pain had diminished, that in the limbs remained stationary. Dyspnoea persisted.

From 3rd to 10th December the patient experienced marked oscillation between the pains of the larynx and the limbs.

On December 10th the stridor had disappeared, and there was notable diminution of arytenoid tumefaction and a return of mobility on the left side of the larynx. Antipyrin was continued, and turpentine frictions over all the body.

A few days after the patient wrote me that there was no longer any throat symptom. After a calm period of eight days, he was attacked again with articular rheumatism in the right wrist, and when I saw him on January 6th, this joint was swollen and painful, and movement of the hand impossible. A laryngoscopic examination showed that the laryngeal cavity had returned to its normal condition.

It appears to me that the hypothesis of acute crico-arytenoid rheumatic arthritis is the most plausible which can be entertained. The sudden appearance of

laryngeal symptoms in the course of rheumatic manifestations of most of the joints of the body, along with marked fever (39°), the momentary abolition of the movements of the left vocal cord coinciding with tumefaction of the region of the crico-arytenoid articulation of the same side, and lastly the rapid disappearance of the laryngeal accidents, appear to me strongly to support this contention.

This is the second case of the kind which I have seen. I saw another such case in 1886, in Schroetter's practice at the General Hospital in Vienna. Similar facts appear to me to be rare; at least, I have not been able to find records of any such cases in the laryngological literature of the last few years.¹

RUALT remarked that some cases of the same description had already been published. He mentioned amongst others the inaugural thesis of Archambault, and the works of Liebermann and Boris; the latter has, indeed, spoken of a pseudo-blennorrhagic rheumatism of the larynx.

GOUGUENHEIM said that the case related was of extreme rarity, and in the whole of his hospital practice he had never met with anything similar. He recalled a case observed by Desbrousses, a pupil of Schultzenberger at Strasburg. In this there was no stridor, but aphonia; the dyspnoea of the patient was caused by visceral complications (pseudo-pericarditis). Although he himself had not seen crico-arytenoid arthritis, he had seen chronic arthritis, and especially arytenoidean perichondritis, both in chronic and acute laryngeal phthisis. He had not observed stridor or adduction of the cords, but rather separation of the cords and aphonia—the latter always. He would not say that dyspnoea and stridor would never be observed, but it had never been seen by him in cases which resembled that of Dr. Luc, nor had it been seen in those rare analogous cases which had been recorded by others and which he had just mentioned.

LUC remarked that his patient presented dyspnoea and no aphonia. The cord was fixed in adduction, which explained the production of dyspnoea due to the approximation of the other cord.

RUALT said that he could not see how this would be sufficient to cause dyspnoea and stridor; subglottic tumefaction would appear to him to be the principal cause.

The Use of Injections of Van Swieten's Liquor into Tissues of Cancerous Appearance. By Dr. MARAGE.

In 1890 Dr. Poucel, Surgeon to the Hospital at Marseilles, made to the Academy of Medicine a communication upon "the curability of tumours of cancerous appearance by interstitial injections of bichloride of mercury." I had occasion to make an application of this treatment a few weeks after under the following circumstances; The patient, an old non-commissioned officer, had syphilis in 1854, of a mild but characteristic type. In 1867 he had a bubo in the groin without blennorrhagia. It was opened with Vienna caustic; after two months he recovered. In 1874 (twenty years after) he married, and the wife and daughter had no specific taint. In 1888, after being in a draught, a swelling appeared on the lower border of the right side of the lower jaw. This disappeared easily. In 1890 he began to perceive a painless tumour, which rapidly developed under the tongue, about the level of the right sub-maxillary gland. It reached beyond the lower jaw and projected outwards. The size of an egg, excessively hard and immovable, it formed one with the inferior maxilla, and presented

¹ A case of acute crico-arytenoid arthritis, published by Ramon de la Sota, and analysed in the "Rev. de Laryngologie," 1886, p. 508, did not show the coincidence of rheumatic manifestations in the other joints, and we cannot, therefore, see why the author considers it as a case of rheumatic affection. Liebermann, a few years ago, communicated to the Soc. Méd. des Hôpitaux the case of a young soldier who, during the course of a blennorrhagia, presented signs of crico-arytenoid arthritis. I quote also the history of a patient of Schultzenberger, who succumbed to pulmonary-cardiac complications in the course of a general articular rheumatism, after having presented signs of laryngeal pain, and at the autopsy of whom the crico-arytenoid articulations were found to show inflammatory swelling.

numerous projections under the tongue. He was admitted into the hospital. For three weeks anti-syphilitic treatment was tried without success. The disease dated from thirty-six years previously, it must be remembered.

In face of this failure, and the appearance of the tumour, it was suggested to him that operation was indispensable and serious. Reading in October, 1890, of the treatment of Dr. Poucel, I persuaded the patient to submit to a trial of this before undergoing operation, which could as well be performed fifteen days afterwards. At some days' interval I gave him, under all antiseptic precautions, two injections of Van Swieten's liquor, with a Pravaz syringe, introducing this deeply into the tissue. The first time only one or two drops penetrated, at the second sitting 1 cc. was injected, causing moderate pain. The next day violent pain and pulsation was experienced, and suddenly in the middle of the night he felt something break in the mouth; he expectorated, and the next day brought me two small calculi. The tumour externally did not diminish in size, and caused him much pain.

An incision made into it on October 16th allowed much pus to escape, and seven days after the patient was completely cured, having no trace of tumour externally or under the tongue. Fourteen months have elapsed without recurrence. Considering the antecedents and rapid development of the tumour, the patient appeared to me to have been affected with a syphiloma, and the salivary calculus either was developed after this or perhaps preceded it, and was the exciting cause. The argument in favour of malignant growth, supported by the inefficacy of internal treatment, has no certain value, for syphilis often resists this, but yields quickly to injections of corrosive sublimate. Dr. Poucel agrees with me in thinking that we had not to do with a malignant growth, and adds, "these injections appear to me to be serviceable in encephaloid, scirrhus and recurrent cancer. I do not believe that they cure in such cases, but they often cause the disappearance of enlarged glands, improve the general condition, very often relieve pain, and appear to transform the soft cancer into a hard growth and retard generalization. I believe them to be without any effect in epithelioma."

HERINET remarked that diagnosis was often very difficult. He had seen one case where a diagnosis of epithelioma was made and operation decided upon. Dr. Fournier ordered specific treatment and the tumour was completely cured.

LOWENBERG suggested that the tumour may have been produced by the retention of the salivary fluid caused by a calculus.

RUULT remarked that retention tumours might be very hard. He had seen such in the parotid region.

Dr. RUULT presented an ingenious instrument which could be used either for injection or instillation of fluids. It had a curved tube for penetration into the larynx. At one extremity it had a piston and pump with a reservoir and the exit of fluid could be so arranged that the liquid could be ejected either as a jet or drop by drop.

Meeting, February 3, 1892.

A Case of Foreign Body (piece of peach) which remained for three days in the Nasal Pharynx. By Dr. ET. SAINT-HILAIRE.

On July 30 last, M. C., aged twenty-five, consulted me for blood spitting, which had lasted three days and frightened him greatly.

There was no hereditary disease; the parents, yet living, enjoyed perfect health, suffering only from some attacks of gout.

The patient had had measles at twelve years of age, had never been seriously ill, and had never had cough. All that he had ever complained of was granular pharyngitis, which had been under my treatment for some months. At the commencement of treatment these formations were large, red, and surrounded by vascular network. He also had naso-pharyngeal catarrh and hypertrophy of the

inferior turbinates. Scraping the naso-pharynx, and application of iodi-iodurated solutions had improved the condition, and the pharyngeal granulations had diminished in size and were less vascular. Some days before the commencement of the hæmoptysis the patient had had removed some bad teeth from the upper jaw. On the left side there only remained the canine and the wisdom tooth; on the right side the two premolars and first molar had been removed. Mastication was difficult and painful for a few days after. For three days he had expectorated blood, and was frightened believing himself to be phthisical. He had also, he said, a pain about the right breast. There was no pain in the throat or nose, and he did not find any blood on blowing the nose. The hæmoptyses occurred without coughing, but the sanguineous expectoration seemed to come from the throat. He also experienced lancinating pains in the right ear. A very careful examination of the chest disclosed no lesion, and there was not anywhere the least crepitation. The hæmoptysis was therefore not of pulmonary origin. The granulations in the pharynx were very large and very red, and covered with a vascular network. The larynx was very congested all over, the vocal cords and ventricular bands being very red, but no cause of hæmorrhage was found there; and still the expectoration continued to be blood-stained.

Rhinoscopic examination explained it. Above the posterior extremity of the inferior turbinated was perceived a rounded tumour of the size of a small nut, partially covered with blood-stained mucus. It rested chiefly on the posterior wall of the pharynx, and all round it was a hæmorrhagic ring. Touching with a curved probe removed the mass, and immediately a movement of the arch of the palate and pharynx caused it to fall into the mouth. Careful examination disclosed it to be a piece of peach, very hard, and with the flesh firmly adherent to the stone. The patient remembered having eaten it three days previously, and next day he commenced to expectorate blood, at first in small quantity, then more and more. Half an hour after removal of the foreign body all hæmoptysis ceased, and next day there was no longer any congestion of the pharynx and larynx. He was not, however, at the end of his troubles. Up to the time he was able to have his artificial teeth inserted it frequently happened that pieces of food entered his naso-pharynx and even into the nasal cavities. There was, however, no paralysis of the muscles of the pharynx or arch of the palate, and sensibility was perfect.

This fact has appeared to me interesting from many points of view. First, is it not curious to find a foreign body resting in the naso-pharynx for three days without giving rise to pain or any other symptom than spitting of blood? Is it not also difficult to explain the entry of a foreign body into the naso-pharynx of a person not having any motor or sensory paralysis of this region? This was solely due to the absence of the larger teeth, for as soon as these were replaced the accident did not recur. How could the absence of teeth lead to this trouble of deglutition? I suggest that incomplete mastication left large pieces in the alimentary bolus, which had no cohesion. When this was seized by the muscles of the pharynx, it may be that a hard piece coming into contact with the alveolar arch had caused a sharp pain, leading to a sharp expiration, and carrying a portion of the bolus into the naso-pharynx. Possibly, also, when the tongue was swept round the palate the food, not being retained by the dental arch, penetrated into the jugo-alveolar cleft, and that inco-ordination of the movements of the arch of the palate was the consequence. Another detail is worth mention. This foreign body in the naso-pharynx produced very intense congestion of the pharynx and larynx. It was certainly a reflex congestion, for it disappeared immediately after removal of the foreign body. May not we compare this to the numerous laryngites and pharyngites cured by the treatment of affections of the naso-pharyngeal cavity?

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THE ELECTRIC LIGHT IN ANTRAL DISEASE,
ETC.

By W. ROBERTSON, M.D., Surgeon Throat and Ear Hospital,
Newcastle-on-Tyne.

(Continued from page 157.)

A MATTER of quite as much importance as a certain means of diagnosing antral implication is the selection of the best site for opening and treating the affected cavity. No means of diagnosis in use, it must be granted, can differentiate, or even enlighten us as to the nature of the contents. It is impossible, therefore, to say what one may have to deal with in approaching the treatment in a case of antral disease. Where we least expect it, very complicated conditions are found, and, in almost every case, arrangements must be made to provide easy and perfect drainage. The essential condition then demanded is an artificial aperture into the sinus, through which the condition of the contents of the cavity can be readily examined, and through which the appropriate surgical measures can be carried on, and subsequent drainage freely effected. The only possible aperture capable of providing such requirements is one through the anterior wall of the sinus.

The attempt to treat such cases through the natural orifice is outside the sphere of criticism. In cases of *ozæna* it is imperforate, it is not a dependent orifice, is generally difficult to find, and, when found, treatment through it yields little or no result.

Puncturing the nasal wall of the antrum is another method of procedure which, considered either as a means of diagnosis or treatment, must be

equally condemned. Over and over again conditions of extensive disease of the antrum have been met with on which nasal puncture could have thrown no light—*e.g.*, inspissated discharge, diseased mucosa without discharge, polypoid degeneration of the antral mucosa without purulent secretion, septa locking up secretion, etc., etc. Drainage must always be imperfect and impracticable. The sooner such a method passes out of consideration the better for all concerned.

Equally unsatisfactory from every aspect is the approach to the sinus by the alveolar process. Perfect drainage is by no means always secured, even were this the only essential. Here, as elsewhere, the "unexpected is frequently happening." To explore the cavity through an alveolar puncture is impossible, and conditions are continually met with, such as septa, polypi, etc., which cannot be treated satisfactorily, or even diagnosed, through an alveolar puncture. There are, besides, other drawbacks to such a procedure—the spur that often rises a quarter of an inch from the floor of the sinus, and, more than anything, the utter impossibility of attempting by any known contrivance to keep this opening patent during the frequently long duration of the treatment. I have heard dentists' appliances to this end spoken of by patients in language more forcible than polite. To sacrifice a sound tooth is strictly inadmissible. Again, the cavity cannot be curetted from this puncture.

With all due respect to the profession of dentistry, strictly so called, it may be demurred to that these cases can be indiscriminately relegated to their care. If it were merely a question of a little pus in the antrum, and a slightly altered mucosa, then no great difficulty need be entertained. But precisely when such a simple state of matters is present only no amount of acumen can foretell. It is by no means always a question of teeth in antral disease, and when the conditions above referred to are met with, the diagnosis as well as the treatment falls to the lot of the surgeon.

To return to the operation of selection, as puncture through the anterior wall of the sinus really is, this can be most easily accomplished. The upper lip is well retracted and an incision made along the mucous membrane at the junction of the cheek and the gum down to the bone over the canine fossa. With an elevator the periosteum and soft parts are cleared from the front wall of the antrum to the extent of the superficies of a shilling. With a small chisel (Schwartz's) and mallet a sufficiently large aperture is made to admit the finger, the bone being carefully removed so as not to disturb the state of the contents, which are now examined with an electric search-light or by reflected light. Septa, if present, are now broken down, any polypi discovered are removed, and diseased mucosa curetted. Bleeding, which is often excessive, from the mucosa, can be readily checked by plugging the sinus for an hour or two. A drainage tube is laid along the floor of the cavity (the opening being made flush with this), and retained for a week or ten days, when the aperture will have become small enough for lead spigots suitably bent, which may be worn for any length of time without inconvenience. Food never is found to enter the puncture, through which the patient can inject and clear out the cavity with the utmost facility. It will be observed that the puncture is most easily

effected, a slight tap to the chisel with the mallet effecting an entrance—a much easier matter than attempting an entrance through an atrophied alveolus. The operation, where possible, ought to be effected under chloroform, because one never knows when extensive measures may have to be carried out. The incision and puncture can be carried out under cocaine with little pain, and under the minute. Desirable ends may thus be attained if further steps are denied us by the patient, and chloroform is disallowed.

The subsequent repair of the aperture is always perfect, the only difficulty being to keep this open long enough in spite of drainage tubes and lead spigots.

The following case affords an illustration of the steps advocated.

Nasal Polypi for Twenty Years; Asthma; Double Antrum Disease.

James S., aged forty-five, married, had had polypi frequently removed by forceps. When first seen both nares were crowded with polypi, and under illumination both antra were in deep umbra. Not much free pus was noticed in either naris, nor could the ostia maxillaria be found, although subsequently found widely patent. Enormous ancient polypi, extending into the post-nasum, were snared. Under cocaine both antra were opened anteriorly, no pus being found. On the right side the sinus when opened was found occupied by what at first seemed a tumour filling the antrum, slightly movable in the space. On endeavouring to detach this from its superior attachments it gave way, and was found to be a thick septum covered by thickened mucosa in a state of polypoid degeneration. Beyond this other less perfect septa were found forming loculi, filled with thick, putty-like, purulent masses. The curette removed a quantity of polypoid structure from the space. The left antra, less perfectly examined (the cocaine not serving for prolonged operation, the case having been deemed a trivial one of empyema, etc., only), was found to contain polypoid structure and curetted. Drainage tubes first, and then lead spigots were employed. The asthma soon disappeared, and the nasal mucosa rapidly assumed a normal aspect, all remains of polypoid structure rapidly disappearing.

It is quite evident that any approach but that through the anterior wall would have been unsatisfactory. Attention might also here be drawn to the unsatisfactory condition the patient would have been left in had the antra not been opened. The usual diagnostic signs were absent, and nasal puncture would have been at fault in furnishing evidence of pus. The bearing of antral implication and treatment on inveterate recurring polypoid degeneration of the nasal mucosa is also well demonstrated.

The following case, amongst other things, well illustrates how readily and easily a prolonged treatment on the above lines is borne :—

Samuel Wright, captain in the Salvation Army, aged thirty-six, married, came to me a year ago with polypi in both nares and general hyperplasia of the nasal mucosa, offensive discharge, etc. Both antral regions in umbra with electric light. Treatment : removal of polypi and redundant nasal mucosa. Anterior puncture of each antrum under cocaine. No pus seen. In the left naris a considerable angular horizontal deflection of the septum.

First, drainage tubes, then lead spigots. In a day or so pus could be syringed out of each antrum per ostium. Six weeks of such treatment reduced the nasal mucosa to a strictly normal state, with all traces of polypoid structure gone. The deflection of the septum so far diminished as to afford perfect patency in the left naris. The patient now left the north for Dover, where he remained for over ten months, meanwhile continuing the use of douches to the antrum, and the lead spigots. On paying me a visit, I found the nasal secretions and the mucosa perfectly normal; only a slight appearance of pus when washing out the antrum. I thought to discontinue the lead spigots and allow the antral openings to close. After a week or two's trial I noticed that the left naris began gradually to close, the left middle turbinated swelling up so as to meet the deflection of the septum. I thereupon re-introduced the lead spigot, and recommended a further recourse to daily douching the cavity, with the result that the intumescence of the middle turbinated resolved itself, and the whole mucosa returned to normal. The right naris remained normal as before.

In this case a tinnitus aurium, which had existed on the left side, entirely disappeared during the treatment of the antrum. Ear complication is a not infrequent occurrence, alongside antrum disease. In Miss S.'s case otorrhœa occurred three times. Now, since undergoing treatment, the membrane of the ear affected is soundly healed and hearing is nearly normal. Only a few days ago I met with another case of acute otitis media in a case of double empyema with ozæna, the last two having been in existence for twenty years (I mean the formation of crusts and discharge from the nose). This lady, Mrs. S., aged forty-eight, married, sent by Dr. Craik, of Pelton Fell, was operated on under cocaine (being averse to chloroform and any but the slightest measures) by an anterior puncture, pus being found and the curette used.

FREQUENCY OF DOUBLE ANTRAL IMPLICATION.

The cases referred to in the course of these remarks forcibly establish the greater frequency of a bilateral antral implication than is generally supposed. Out of the seven cases (taken as they presented themselves) six were found to be bilateral. A reference to recent literature on the subject would seem to indicate that this is becoming more and more the general impression.

Reference might also be made to the frequent but perhaps obscure relationship of a diseased antrum to pathological intra-nasal conditions, as witness the relapse of Samuel Wright's case on closure of the antrum opening. The relationship exists indubitably in every case of recurring polypi and ozæna. I should likewise suspect antral disease in all cases of excessive purulent discharge from the nose. There is also another class of cases where I doubt not some affection of the antrum exists, viz., in those cases of offensive breath where the nasal mucosa, as well as that of the pharynx and the larynx, although slightly congested yet afford no grounds for believing it to be the source of the fœtor.

PROFESSOR POLITZER IN LONDON.

THE renowned Viennese Professor recently spent a short holiday in London, and on Monday, April 4th, Sir William Dalby invited most of the Metropolitan aurists to his house to meet him. Professor Politzer demonstrated a number of specimens he had brought with him. Among others were some illustrating varieties of the normal mastoid process : (1) pneumatic ; (2) diplœtic and solid ; and (3) mixed. Abscess he stated to occur most frequently in the pneumatic form, and mostly in the sub-cortical cells. This was notably seen in influenza, but in idiopathic cases also, extension taking place into the cells, which were apt to be shut off from the antrum by swelling of the mucous membrane, and then to constitute shut suppurating cavities. Many cases got well without operation, but the influenzal cases usually required it. His rule was to operate if relief was not obtained by the use of catheteric injections and Leiter's coil for three or four days. He found that opening the mastoid led to a diminution of the discharge, even though there was no communication.

A section of the organ of hearing from the external meatus to the orifice of the Eustachian tube was then shown, and afterwards dissections of decalcified and non-decalcified petrous bones of wonderful delicacy. The easier method of taking celloidin casts in celloidin and in paraffin was also illustrated. The anatomy of the "attic" and Prussak's space was demonstrated by means of thin stained sections mounted between plates of glass. As aurist to an asylum for aged people, the Professor had the opportunity of studying the pathology of senile deafness, and found ankylosis of the stapes in many instances. Preparations of this condition were displayed, and showed that there was usually a fibrous union between the limbs of the stapes and the pelvis ovalis, although osseous ankylosis was also exemplified.

This was followed by the demonstration of some recently invented or modified instruments, of which the following were the most interesting :— (1) An adaptation of Hartmann's canula for blowing powders into the "attic." There was a small receptacle for powder, which could be opened by means of a slide, and a small blowing apparatus. The powder employed was of course boracic acid, and the Professor expressed satisfaction with the results obtained by its use in this region. (2) Soft elastic tubes of the same shape for introducing fluids without causing pain. These tubes were quite as delicate as the hard ones we have been in the habit of using, but perfectly soft and flexible. (3) A Hartmann's stunted canula through which a very fine soft tube could be introduced. This was intended to remove the difficulty connected with the passage of a curved point of sufficient length to reach the roof of the "attic." The inner tube was like a short intra-tympanic catheter. (4) Mastoid chisels of various shapes. Some were flat, some hollow or gouge-shaped. The Professor apparently used the mallet and chisel to the exclusion of every other method of opening the antrum. (5) A punch forceps for removing portions

of the wall between the meatus and "attic," so as to establish free communication between the two cavities. This instrument seemed to be absolutely safe, and to have great power. The short cutting points were at right angles to the axis of the instrument, and were made to come together when two convenient handles were compressed. The instrument would fill the meatus sufficiently to prevent illumination of the seat of operation at the time, but this would be quite unnecessary for an operator accustomed to aural manipulation. (6) An improved Gottstein's curette. This was somewhat heart-shaped and so curved that the two lobes could be passed into the posterior nares from behind, one on each side of the septum, so as to grasp any vegetations growing into the upper part of the choanæ.

The Professor then demonstrated a method of judging of the patency of the Eustachian tubes by the relative audibility of a C' tuning-fork (512 vibrations per second) held below the external nares during and apart from the act of swallowing. It is greater during this act in normal cases, but when the tube is blocked the full increase does not take place, and its gradual return under treatment is used as a measure of the improvement. Its value as a method of differential diagnosis was also pointed out.

The chief varieties of result got in this experiment are the following :—

In unilateral deafness *if the tuning-fork thus used is heard better in the better ear* the case will probably be one of middle-ear catarrh with Eustachian obstruction, or one of nerve-deafness (labyrinth, &c.) To diagnose between these two, other tests must be used. Then, if Weber's test (tuning-fork on the vertex) is heard best in the worse ear and Rinne's test is negative (air-conduction worse than bone-conduction), with possibly objective evidence of tympanic disease, the former condition is present. If, on the other hand, the fork by Weber's test is heard better in the better ear and air-conduction is better than bone-conduction, nerve-deafness is to be recognised.

In the opposite case of the *tuning-fork under the nostril being heard better in the worse ear*, the case is in all probability one of middle-ear catarrh without Eustachian obstruction.

Professor Politzer expressed his great satisfaction with the reception offered him by his *confrères*, and alluded to the fact that it was in that very room that he had received his first instruction in otology from our countryman, the famous Toynbee.

NOTICE.

THE greater portion of this number is given up to a report of a recent meeting of the British Laryngological Association, which involves the holding over of much matter that would otherwise have duly appeared.

ASSOCIATION MEETINGS.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

Held March 25, 1892.

The President, Mr. LENNOX BROWNE, *in the Chair.*

THE minutes of the previous meeting having been read, the PRESIDENT said—

Gentlemen,—Since we last met the Association has lost its most distinguished member, one whom we chose as our first President, and to whom an everlasting debt of gratitude is due, not only from the Fellows of this Society working in the same special field, but from the whole medical profession and—through the increased power to give relief which the researches and lessons of this great man afforded them—from the world at large. Our colleague, Dr. Norris Wolfenden, has in the March number of the JOURNAL OF LARYNGOLOGY written such a complete and such a sympathetic memoir of our deceased Fellow, Sir Morell Mackenzie, that it is unnecessary, with the full programme we have before us, to attempt any elaborate extension of his just eulogy, but I may be permitted to say, without being accused of hyperbole, that had it not been for the genius and energy of Morell Mackenzie our department of medicine would never have taken the prominent position which is unanimously accorded it in the present day by all fellow workers in other countries; and only the few who like myself can remember the virulence with which he was attacked some thirty years ago when he established the first special hospital for throat diseases can understand how a nature, singularly lovable in all other relations of life, became embittered and combative towards so many of his own calling. Much of this feeling was, I am convinced, due to the knowledge that many even of his own colleagues in his public work were intensely jealous of his early recognized abilities and of his phenomenal success in practice. It reads, indeed, rather curiously, in the light of recent events, to find the names of these men, occupying the very highest seats in the councils of the colleges, gladly but humbly appended to microscopical reports of morbid growths removed by Mackenzie.

My acquaintance with Mackenzie dates from a period prior to my qualifying, and when I returned to this country from voyaging round the world he was the first to call on me. Well do I remember the little dispensary in King Street, and the inaugurative days of Golden Square. In 1865 I began to learn the laryngoscope by making drawings for Mackenzie, who, himself no mean artist—for he himself illustrated his Jacksonian prize essay—was at once the severest and the most appreciative critic I ever met with. From 1866 to 1873 inclusive, I was in daily

converse and association with him, and, as I hope I have never been backward in acknowledging, I owe much of whatever success I have attained not only to his teaching and enthusiasm, but to the example of his unflagging energy—greatest always whenever, as was not infrequent, he was suffering physically—to his marvellous capacity for organization and for taking pains in even the minutest details. It is another remarkable trait in Mackenzie's character, which was full of paradoxical contrasts, that though occasionally accused of a too cursory treatment of his private clients, he would devote hours to an interesting hospital case, and that none of his written words were allowed to go to press until polished and finished to an extent that appeared almost fastidious.

Gentlemen, Mackenzie has his reward; the world appears surprised that one known so universally for the last thirty years as a successful practitioner and author should have died so young, but of him indeed it may be said his works live after him, for nothing he wrote can ever be devoid of solid value, and, as I ventured to predict when congratulating him twelve years ago on the appearance of the first volume of his great work, it will be impossible for any author on any subject connected with laryngology to avoid quoting the name of Morell Mackenzie as an authority.

Let me, in conclusion, express a hope that the jealousies and the bickerings connected with this great teacher will now subside, and that many of our craft whom we highly respect and esteem and whom we would gladly have with us, but who have from various motives withheld or withdrawn from this Association, will now join us, if only as an acknowledgment of the indebtedness they, in common with us, must feel to Morell Mackenzie as one of the brightest lights in that science which it is the purpose of our body to advance.

Dr. GEORGE STOKER, the Secretary, then read the following correspondence, and the President's suggestion that these letters be entered upon the minutes was unanimously approved of:—

“Feb. 4, 1892.

“The Council of the British Laryngological and Rhinological Association meeting to-day, make it their first business, on the proposition of Mr. LENNOX BROWNE, President, seconded by Mr. MAYO COLLIER, unanimously to offer a vote of condolence and sympathy to LADY MACKENZIE and her family on the death of SIR MORELL MACKENZIE, the first President of this Association, and to record their deep sense of the loss which that branch of science represented by this Association has thereby sustained.

“Presented on behalf of the Committee, which immediately afterwards adjourned, by

“GEORGE STOKER, Hon. Secretary.”

“19, Harley Street, Cavendish Square.

“LADY MORELL MACKENZIE and her family desire to return their grateful thanks to the Council and Fellows of the British Laryngological Society for the kind and sympathetic vote of condolence sent by the

Society on the occasion of the death of SIR MORELL MACKENZIE. The kind expressions of esteem and regard for Sir Morell and the recognition of his labours are greatly valued by Lady Morell Mackenzie and her family."

The following gentlemen were unanimously elected Fellows of the Association :—

G. A. DAVIES, Esq., M.R.C.S., Newport, Monmouth.

NIEL GRIFFITHS, Esq., M.R.C.S., Cheltenham.

GEORGE HOLLOWAY, Esq., B.A., M.D. Cantab., 5, Bentinck Street London.

L. HEMMINGTON PEGLER, Esq., 7, Radnor Place, London.

The PRESIDENT showed a patient suffering from *Hypertrophic Rhinitis with old history of Lupus*.

Case I. : The notes of this interesting case were as follows :—

M. M., aged forty-six, female, presented herself at the Central Throat and Ear Hospital on January 11th of this year, complaining of "pain in her throat" of two months' duration. She had suffered with nasal stuffiness for eight or nine years, and had been under treatment for polypus of the nose, for lupus of the nose, and for inflamed ankle joint, the nature of which was obscure. She was also the subject of frequent "gatherings" on her fingers, general debility, and "colds in the nose." Had been delivered of one child, which was born at the eighth month and lived four weeks only.

State on admission : Has a very unpleasant smell from her nose, a persistent tickling in her throat, especially when in bed, and her mouth is always dry in the morning. She cannot appreciate the smell of strong coffee, tea, or cooked meats.

Both nostrils were found to be obstructed, the left more than the right. In the *right* is seen an irregular, bright pink, spongy granulation mass, apparently springing from an hypertrophied septum. The middle turbinal cannot be seen, but the inferior is observed to be swollen and pale in contrast. The *left* nostril is chiefly occupied by similar granulation masses, growing from the middle turbinal. They are paler than those on the septum in the right nostril, and readily bleed on probing. The inferior turbinal on this side is also hypertrophied, and still paler than the new tissue. There is well-marked pharyngitis lateralis.

Has not lost weight and is not troubled with night sweats. The lungs are normal, with the exception of some harsh breathing over both apices. The expectoration is rather free, but contains no bacilli of tubercle and no elastic tissue.

A portion of the growth from the middle turbinal was removed, and on examination Mr. Wingrave found as follows :—

"The greater part of the structure removed consists of small cell-inflammatory tissue, covered with plain columnar and columnar ciliated epithelium. Mucoid degeneration is well marked in some places,

" whilst in others masses of cell-clusters are seen, resembling, and possibly " identical with, 'giant cells.' Blood-vessels are plentiful, and their " walls show marked fibrosis, whilst here and there epithelioid pro- " liferation has blocked the lumen. Very little erectile tissue can be made " out, as it is invaded by the small cells. Cyst-like invaginations of " columnar epithelium are shown in several of the sections, whilst normal " mucous acini are fairly numerous. Lastly, the bone and periosteum " are found to be perfectly healthy, excepting that here and there the " small cell tissue appears to be invading the cancellous spaces. *There " is no necrosis.*"

Mr. Lennox Browne remarked that this case was one of great interest from several points of view :—(1) Mr. Wingrave's report, in which he suggested that the nature of removed tissue was that of a low type of tuberculosis—lupus, in fact—was made in ignorance of the clinical history. (2) The powers of repair in this patient were unusually good in one suffering from lupus. She had made an excellent recovery from the external ulceration, and promised to do as well under treatment of the intra-nasal disease. (3) The treatment adopted had been that of curetting and free rubbing in of a sixty per cent. solution of lactic acid, the parts having been previously cocaineized.

The President also read notes of a second case of *Lupus of the Nose, Pharynx, and Larynx.*

Case II. : E. W., female, aged eighteen, was admitted into the Central Throat and Ear Hospital, February 8th, 1892, complaining of deafness and sore throat and nose. Her history was that, three years ago, a patch of ulceration commenced on the left side of her nose, which became very swollen and red, but gradually returned to its normal size. The ulcerative process, however, continued to extend, reaching her lip six months ago. There is no family history of lupus or tubercle, but the patient is ill-nourished and ill-developed. The father suffers with some 'throat disease.' She has been deaf since infancy, and has lost flesh lately.

On examination, the tongue was seen to be covered with large, red tuberculated excrescences, which extended upwards, involving the faucial pillars and the soft and hard palate. The uvula had disappeared, and cicatrization shows that the disease had attacked the pharynx.

In the larynx some small tubercular nodules were seen in the inter-arytenoid space. Both arytenoid eminences were infiltrated, as also both ventricular bands, but the vocal cords were free. The epiglottis was nodulated and pale.

In the nose the disease was confined to the skin, which was involved for some distance from the edge of both alæ.

Her expectoration was very scanty, and did not contain any bacilli, nor any lung tissue.

There was marked dulness at the base of right lung, with numerous moist sounds.

These conditions were practically unchanged on March 12th, when she developed erysipelas. This was by no means her first attack, and as the previous ones have been attended by improvement in her lupus, it is to be hoped that the same happy result may again eventuate.

Dr. W. MILLIGAN.—*Primary Nasal Syphilis. Second Attack of Syphilis.*

Mr. President and Gentlemen,—The comparative rarity of second attacks of syphilis makes the record of the following case of interest.

The patient, a married man, aged thirty-two, first noticed a certain amount of pain and discomfort in the right nostril four weeks after exposure to a possible source of syphilitic infection.

Previous history : Towards the latter part of 1884 the patient consulted a London surgeon on account of a painful sore situated at the margin of the nail of the right index finger.

The sore was first treated merely as a poisoned wound. During the period of treatment, however, a roseolar rash appeared upon the back and chest. The cubital and axillary glands became enlarged. The sore was accordingly looked upon as being of syphilitic origin, and treatment by means of mercury was immediately resorted to. In six months' time patient was dismissed as cured. During this period, however, the patient's wife became syphilitised, and accordingly underwent a mercurial course of treatment during the greater part of 1885.

The first child was born in July, 1886, the second in January, 1888, and the third in February, 1890. These children appear to enjoy good health. In 1887 the patient's right pupil was noticed to have become markedly smaller than his left, and has remained so ever since. Early in 1889 patient felt much run down in health, and consequently underwent another course of treatment. From that time up to the date of the present affection he had enjoyed comparatively good health. In June, 1891, four weeks after exposure, the right nostril became irritable. On examination the tip of the nose was found inflamed, and painful to the touch. Within the margin of the right ala nasi, upon its septal aspect, an oval indurated sore about the size of a small bean was found. The sore had all the appearances of a true Hunterian chancre. No enlarged glands were detected.

The sore was destroyed by means of the galvano-cautery, and the raw surface dressed with iodol. A nasal douche was prescribed, and mercury in the form of hydrarg. c. cretâ pills (gr. i.) was ordered three times a day. Seven weeks after inoculation a fairly copious roseolar rash appeared upon the chest, and a few isolated papules between the shoulder blades. These, however, rapidly disappeared. The nasal chamber was kept constantly irrigated with antiseptic washes, and the sore dressed, at times with iodol powder, at times with ungt. iodoformi. In three weeks the raw surface left from the application of the cautery had healed. The mercury pills were continued, and small doses of iodide of potassium given in addition. At the present time the general condition appears satisfactory, and there has been no further trouble in the nose.

In this case we have, then, an example of a second attack of syphilis seven years after the first.

Mr. Jonathan Hutchinson, in his classical work upon syphilis, admits the possibility of second attacks, and cites several illustrative cases. He quotes from Diday, who says, "That second attacks of syphilis, although "not very rare, are yet exceptional to rule ; that when they occur they

"prove that the patient presenting them had been cured of his previous attack so far as it was a blood disease, though, perhaps, not necessarily in respect to tertiary symptoms. Also that the character of the second attack will be influenced by the length of the period which has elapsed since the first, and perhaps also by its severity." In the case before us, no doubt the severity of the attack was considerably modified by the effects of the previous condition. It is interesting to note that in the first attack the sore was upon the right index finger, in the second within the margin of the right ala nasi.

Dr. WARD COUSINS mentioned that he had seen a woman with well-marked primary syphilis of the lip with eruption. He had not had any experience of second attacks of syphilis.

Dr. STOKER denied that the fact that the patient developed the sore on the second occasion proved that he was cured of the first attack. He pointed out that the patient, in this case, had contracted syphilis seven years before, and four weeks before the chancre developed in the nose he had exposed himself a second time to infection. That fact did not necessarily militate in favour of his having altogether recovered from his first attack.

Dr. DONALD STEWART observed that the case was very interesting and unusual. It occurred to him that possibly there might have been a flaw in the diagnosis. The patient was said to have had syphilis, and his wife had syphilis not in a very unusual place. The children, however, were healthy. With reference to the occurrence of tertiary symptoms, these were probably due to some local weakness of the tissues that caused a development somewhat akin to what they saw in tumours. That was not said to be a blood disease.

Dr. STOKER said he merely wished to protest against its being accepted as a dogma, that the subsequent contraction of syphilis was to be accepted as proof that a previous attack had been cured.

Dr. WARD COUSINS said he thought it was generally understood that so long as syphilis remained a blood disease it was communicable, but the moment it became a question of tissue lesions only, then it was no longer capable of being conveyed. He had had striking examples of the truth of this. Of two brothers, both in the Royal Navy and both syphilitic, one was scarred all over, and had suffered from syphilitic epilepsy. He married a young wife and had a healthy lot of children. The other, still subject to secondary manifestations, married, and his wife miscarried several times.

Dr. MILLIGAN, in reply, said that personally he did not doubt that the patient had had syphilis previously, having become inoculated on the index finger. Moreover, the wife was taken to the same surgeon who had attended to the husband, and he had treated her accordingly. He thought that the evidence was conclusive. So far as he was aware the children were healthy, and there had been no miscarriages. The patient had been free from all symptoms for several years, and had apparently absolutely got rid of the effects of the original attack. In quoting from Mr Hutchinson's remarks, he understood him to mean that a man might be cured of the blood disease, but was still susceptible to local tissue changes.

Dr. W. MILLIGAN.—*Idiopathic Abscess of the Larynx.*

Mr. President and Gentlemen,—The rarity of cases of idiopathic abscess of the larynx seems to me to be sufficient reason for bringing the details of the following case under your notice.

The patient, a man aged twenty-three, was a wood turner by trade.

Family history : Father died at the age of fifty from heart disease. Mother alive and healthy, aged fifty-six. Has one brother and two sisters alive, all healthy. One sister died in infancy.

Previous history : Patient has never been robust, but has never had any severe illness. No history of syphilis.

Present condition : The first symptom noticed was a slight swelling over the region of the right ala of the thyroid cartilage. Shortly afterwards a certain discomfort on swallowing. There was no dyspnoea and no aphonia. The swelling having gradually increased, the patient consulted a doctor, who told him that he was suffering from a tumour in the neck, and recommended the daily application of iodine liniment. Three weeks after the onset of the trouble the patient came to the Manchester Hospital for Diseases of the Throat for advice. On examination, a swelling, the size of a pigeon's egg, was found lying over the right thyroid ala. The swelling was painful on pressure, and on palpation gave the idea of deep-seated fluid being present. The skin had been much irritated by the frequent application of iodine. There was slight dysphagia, but no aphonia or dyspnoea. Tongue was furred, bowels constipated, and temperature slightly above normal. On laryngoscopic examination an ovoid swelling was seen upon the laryngeal surface of the epiglottis upon its right side. The mucous membrane covering it was slightly congested. Elsewhere the laryngeal mucous membrane appeared normal. On palpation with the laryngeal sound the swelling was found to be slightly elastic. At a point directed towards the middle line of the larynx the mucous membrane presented a slightly yellowish tinge. The right cord was nearly concealed by the swelling, the left cord appeared normal. On pressure being applied to the swelling on the outside of the neck, no change in the size of the laryngeal swelling (which was kept under close observation while this was being done) could be detected.

It was considered that the patient was suffering from a slowly-increasing abscess of the larynx, the tendency of which was to point externally. Sedative inhalations were ordered and poultices to be applied externally. The pain and swelling, however, went on increasing, and as there was no longer any doubt as to the presence of matter, a free incision was made, and a quantity of pus and broken-down *débris* evacuated. A drainage tube was put in and the parts dressed. No change having taken place in the appearance of the laryngeal swelling, it was decided to incise it freely. An incision was accordingly made with a laryngeal lancet across the yellowish area already spoken of, with the result that a small quantity of pus was expectorated. The swelling rapidly subsided, and at the end of a fortnight no trace of the original condition could be seen.

The case appears to be of interest—

(1) From the very insidious course the disease ran, in this respect resembling the cases recorded by Thin, De la Sota, Ganghofner, Marcèt, and Hillman, and referred to in an article upon Abscess of the Larynx by Richards, published in "The International Journal of the Medical Sciences," May, 1890.

(2) From the absence of any marked laryngeal symptoms.

(3) From the tendency of the disease to point outwards (although the path of communication must have been a very small one).

The symptoms are, as a rule, severe ; at other times the disease may run a mild and uneventful course, and terminate by spontaneous rupture.

The commonest causes of the trouble appear to be infectious diseases, scarlet fever, measles, etc., and frequent colds. Males appear to be much more frequently affected than females. Of the twenty-six cases observed by Richards, sixteen were males and nine were females. In one case the sex is not mentioned. The decade between twenty and thirty affords the largest number of cases.

With regard to the second point, at no time was there any indication that the laryngeal mucous membrane was the seat of disease. There was no dyspnœa and no aphonia. The situation of the abscess in any particular case must naturally determine the special symptoms. In a series of thirteen cases recorded by the late Sir M. Mackenzie the abscess occurred at the root of the epiglottis six times, in one of the ventricular bands four times, and in one of the ary-epiglottic folds three times. In the series of cases recorded by Richards the base of the epiglottis was involved six times, the arytenoid eminence twice, the ary-epiglottic folds three times, the ventricular band once, the vocal cords three times, the sub-glottic portion of the larynx six times, the internal surface of the thyroid cartilages twice, and the pyriform sinus twice.

Occasionally the abscess may be somewhat diffuse and involve several of the component parts of the laryngeal mucous membrane.

Although no communication could be made out between the laryngeal abscess and the abscess in the peri-thyroid tissues, there is little doubt but that some path existed between these two foci. As a rule the abscess points internally, but at times externally, as in the present case and in a similar case recorded by Rühle.

In respect to treatment, early incision should be resorted to, otherwise there is a risk of the abscess causing suffocation. If the abscess be very large it may be necessary to perform tracheotomy before attempting to open it.

DR. WARD COUSINS.—*A Case of Deep Abscess of the Neck followed by Acute Laryngeal Symptoms.* Tracheotomy. Recovery.

A child, one year and ten months of age, was admitted under my care into the Royal Portsmouth Hospital in January, 1891, suffering from acute laryngeal symptoms. The mother stated that she had been ill three weeks, and that the difficulty of breathing had gradually increased from the onset. The little patient appeared greatly distressed, and the breathing was rapid and attended with a loud crowing noise. No tender spot or

swelling of the neck could be detected. The throat was clean, the voice clear, and the resonance of the chest normal. The temperature during the day was not much elevated, but at night it reached 101° or 102° . She constantly sat up in bed with her head inclined a little forwards. In forty-eight hours after admission the symptoms dangerously increased, and there was marked recession of the thoracic walls during inspiration, so that tracheotomy was performed without delay. A free incision was made at the lower part of the neck and the structures divided in the direction of the trachea. Very severe hæmorrhage occurred and several vessels were clamped with pressure forceps. When dividing the deep structures over the tube the wound was suddenly filled with thick pus, and about four ounces rapidly escaped. The incision was most carefully cleansed and the hæmorrhage arrested, and as the breathing was still unrelieved the trachea was opened and a tube inserted. After a few hours the little patient rallied and the respiration became tranquil. Free suppuration continued for two weeks and escaped around the tube. It then slowly subsided, and at the end of six weeks the child was convalescent and the wound healed.

Remarks. Before the operation the little patient was carefully watched, and the neck scrutinized over and over again and compared with the necks of other children of the same age, but no change could be detected. An effort was made both with the stethoscope and the hand to determine the seat of the disorder, but it is my experience that physical examination of this kind is seldom reliable, and in young children it is especially uncertain if the noisy respiration can be heard more loudly, or the thrilling felt more distinctly, at the place of constriction than at any other part of the respiratory tube. The entire absence of hoarseness, however, certainly indicated that the obstruction did not arise from laryngeal inflammation. The disease was not an ordinary abscess of the connective tissue of the pharynx, or a deep suppuration connected with spinal caries, for the act of deglutition was not involved, the glands below the jaw were not enlarged, and there was no swelling of the throat or fauces; moreover, all the movements of the head were performed with ease, and the neck was free from tenderness. Fortunately, the latent cause of the disorder was accidentally reached during the operation. The incision was commenced lower down than usual in the neck, as the symptoms were considered to be associated with a disturbance quite external to the larynx and pharynx. It is my opinion that this deep purulent accumulation had a glandular origin within the chest, and that the trachea had been slowly compressed during its formation.

Dr. ELLIS, in reference to the possible cause in Mr. Milligan's case, remarked that though the statements of patients were not to be relied upon implicitly they were sometimes right. He mentioned the case of a patient who had applied at the Newcastle-on-Tyne Throat and Ear Hospital, and persistently declared that what he (Dr. Ellis) took to be a hyperæsthetic condition of the throat was due to her having partly swallowed a fish bone. He was unable to detect any trace of the bone, but she continued to tease him about it. At last as the tonsil began to swell it was removed, and his colleague, Dr. Stainthorpe, having cut it

open, found the long-lost fish bone firmly embedded in its substance. It was evidently the bone of a plaice, and nearly an inch long.

Dr. DUNDAS GRANT, in reference to Dr. Milligan's case, observed that it was interesting in that the source of abscesses of the front of the neck could often only be made out by careful laryngoscopic examination. He referred to a case of his own in which there was a swelling at the side of the larynx, the exact connection of which with the larynx was rather difficult to make out. It was obviously of an inflammatory character. On laryngoscopic examination he found one of the arytenoid cartilages was considerably hampered in its movements, and there was a good deal of swelling about the crico-arytenoid joint resembling primary perichondritis. He applied cold by means of Leiter's coil, and prescribed rest and quiet. In a few days the pain and discomfort disappeared, and in about a week the mobility of the arytenoid cartilage had to a great extent returned. If one had not examined this case laryngoscopically one would not have thought it of sufficient importance to enjoin complete rest, and to prevent all exposure, and particularly to order rest for the larynx, so far as the use of the voice was concerned. Dr. Ward Cousins' case was one which raised a number of speculations. He commended his courage in not risking a definite opinion as to where the pus came from. He had himself seen cases, *post-mortem*, where the source had been discovered in the most unexpected places. In one such case it had extended from the ear. He asked whether the stridor was distinctly laryngeal or whether it was of the croaking character, such as would be likely to be caused by pressure on the trachea; also whether there were violent excursions of the larynx. He pointed out that when the seat of the obstruction was in the larynx then the latter was usually pushed up and down with respiration. When, on the other hand, it was lower down the larynx remained stationary. Personally, he had been unable to make out whether this rule was absolute, and he asked whether the case threw any light upon the question. He admitted the possibility of the pus coming, as suggested, from the chest, pushing its way beneath the layer of cervical fascia which was attached to the cricoid cartilage, which would be cut through in performing tracheotomy in the situation described.

Dr. PEGLER asked if there were no redness, swelling, or any signs whatever, indicating the presence of an abscess? He said the case recalled to his mind one of deep abscess of the neck of considerable interest which he had seen in the country a short time ago in consultation with Dr. Handford, of Nottingham. After suffering a week from simple acute pharyngitis, the patient, a male, aged twenty-five, complained of pain and tenderness to the right of the middle line about the level of the thyroid isthmus, there being also redness and slight glandular enlargement there. He was confined to bed, and swallowing became extremely difficult and painful, till only a very small quantity of liquid could be taken slowly. There seemed good reason to fear involvement of the trachea, and a necessity for having to perform tracheotomy at any time. Examination by the laryngoscope and for retro-pharyngeal abscess gave negative results. Two or three days before the termination of the acute symptoms the sufferings of the patient were considerably aggravated by the constant

necessity for hawking phlegm and mucus, with fear of being choked, till one night, a fortnight from the commencement of the illness, a quantity of pus was suddenly ejected by the mouth. It was evident that an abscess had discharged into the œsophagus. Complete relief resulted, and the patient made a good recovery.

Mr. MILLIGAN, in reply, admitted that he sometimes ignored patients' statements, as they were frequently so unreliable. With reference to the necessity for a laryngoscopic examination, he said he did not think he would have thought of examining the throat had the patient not applied at a throat hospital. He agreed, however, that it ought to be a routine practice in every case of obscure swelling in the neck to examine with the laryngoscope.

Dr. COUSINS, in reply, repeated that there was an entire absence of any bogginess or swelling in spite of the most careful scrutiny for any such indication in the shape of an enlarged gland, a tender spot, redness, or anything of the kind. It was that very absence that made him feel that he had to do with something very unusual, indeed he feared that the pressure might be too low for him to reach by tracheotomy. He did not rely very much on the value of physical examination in very young children, nor did he attach much importance to the greater or lesser mobility of the larynx. At the same time he always examined very carefully with the stethoscope and with the hand, but there was nothing in the physical signs to indicate in the slightest degree what was the nature of the case.

In reply to the President, he admitted that there was retraction of the ribs during inspiration, but that of course would occur in any case of serious obstruction to inspiration. The temperature was 101° at night, but the child was not long enough under observation for him to have been enabled to draw any conclusion from the thermometric chart.

Dr. SANDFORD.—*Two Cases of Glosso-labio-laryngeal Paralysis.*

I venture to bring the following two cases of glosso-labio-laryngeal paralysis before the Association, partly in the hope that they may prove of some interest in themselves, but mainly with a view that, if the Fellows will be so kind as to give some of the results of their experience in similar cases, much interesting and instructive information may be elicited.

My first case is one of bulbar paralysis. The patient, a farmer, aged forty-six, a well-built man, apparently in perfect health, leading an active, out-of-door life, with absolutely healthy surroundings, and no specific history, consulted me on August 8th, 1891. He stated that some twelve months since he had noticed his "speech becoming thick," his "lips getting stiff," and a slight "hang" in swallowing. Of late all these symptoms had become more marked, and occasionally fluids had, on attempting to swallow them, returned through the nostrils. At present his pronunciation is almost unintelligible, his lips moving slowly, and with difficulty. His tongue can be protruded in the median line as far as the lips, but is quite incapable of any lateral or vertical movement. The mucous membrane is greatly puckered and covered with a dry, brown fur. The patient is quite cheerful in manner, and is in perfect health in every way, with excellent appetite and digestion, both pulse and respiration

being normal, but he cannot swallow solid food. His sight and hearing are acute. There is no optic neuritis, and no evidence of further paralytic or ataxic symptoms. He states that he has lost flesh considerably, his present weight being eleven and a half stone. The urine contains quantities of sugar. The symptoms, of course, indicate lesion of an extremely limited portion of the floor of the fourth ventricle. It would be interesting to learn the opinion of those present as to the probable pathological condition, results of treatment, etc. In the fulness of time, I daresay, I shall have an opportunity of bringing under your notice the results of *post-mortem* examination.

My second case is one of unilateral glosso-pharyngo-laryngeal paralysis, the result of injury. The patient, T. K., aged twenty-seven years, was brought to me by Dr. Curran, of Killeagh, suffering from extreme hoarseness and pains in the neck. I found his left vocal cord completely paralysed; the soft palate was, on retraction, drawn to the right side; the tongue was on protrusion deflected to the left, its movement being otherwise perfect; the lips were slightly immobile, the patient being unable to whistle. The head was turned to the right front, the anterior margin of the left sterno-mastoid being flaccid, and some of its muscular fibres having apparently been ruptured. Any concussion, as in jumping or sudden turn of the head, caused severe pain in the back of the head and neck. He stated that two months previously he was leading a young horse, which suddenly reared and bolted, giving him a sharp twist round, and throwing him violently to the ground. He was carried into a house, and given something to drink, a portion of which, on his attempting to swallow, returned through the nostrils. From time to time he had coughed up small quantities of blood.

He was admitted to hospital and put on iodide of potash, with nuxvomica, etc., the constant current being applied regularly for some time. The pains, etc., have completely disappeared, and he has returned to work, expressing himself as feeling quite well in every respect except for the hoarseness and difficulty in swallowing solid food.

The paralysis remains quite unchanged. The symptoms must, I should think, have been due to fracture through the foramen lacerum, or to injury by sudden violent extension of the seventh, ninth, tenth, eleventh, and twelfth nerves.

The PRESIDENT, in allusion to the second case, mentioned that of a young naval officer who had entirely lost the voice after a blow on the larynx. When he examined him he found there was immobility of one vocal cord, and he took it to be a case of primary inflammation from injury to the crico-arytenoid articulation. He recovered under enforced and absolute rest of the voice and the application of constant cold by means of Leiter's coil. In Dr. Sandford's case there seemed to have been a wrench, involving probably some injury to a nerve.

Dr. GRANT asked what was the condition of the tongue.

Dr. SANDFORD said it was deflected to the left side.

Dr. DUNDAS GRANT remarked that the symptoms in the second case differed to some extent from those of bulbar paralysis, and they appeared to be limited to the distribution of the spinal accessory nerve. There was

paralysis of one sterno-mastoid, a muscle which was mainly supplied by that nerve, and the laryngeal motor nerves were derived from the accessory nerve to the vagus. In bulbar paralysis properly so called the laryngoscopic symptoms were usually bilateral, and the difficulty was either the production of voice or the respiration. He referred to one very peculiar case, in which the patient was unable to achieve anything in the nature of a cough because his laryngeal apparatus did not permit of the momentary closure of the glottis essential to this effort. In this case fortunately there was paralysis of the adductors as well as the abductors, or tracheotomy would have been necessary. In the second case the probabilities of recovery were slight indeed if after a little time the effusion which had taken place did not clear up.

Dr. STOKER mentioned a case of peripheral paralysis in the person of a gentleman between seventy and eighty years of age. The laryngeal troubles in his case were, as Dr. Grant had observed, bilateral. He had, however, no difficulty in respiration, though he had great difficulty in articulation. This did not arise from any want of power in the vocal cords, but from paresis of the muscles of the lips. He had a good deal of anæsthesia about the larynx, and had to eat with the greatest care to avoid choking. He could cough very satisfactorily, as he himself could testify, for the cough had often kept him awake at nights, he being in charge of the patient.

Mr. V. H. WYATT WINGRAVE.—*Some Points concerning the Lingual Tonsil, bearing upon a Regional Nomenclature of the Tongue.*

The absence of clear and definite terms in describing the different regions of the tongue has, doubtless, been observed by many of you. To speak of the "dorsum," the "root," the "sides," etc., is a very ambiguous method of localization. In the course of some histological and pathological observations connected with the tongue, specially directed to a region so interesting to laryngologists—the posterior third—a probable solution presented itself in the "sulcus terminalis." The parts in front of and behind this line are distinctly different, in structure, in function, in nerve supply, in development, and pathologically.

This line, the "sulcus terminalis," for all practical purposes, corresponds with the V line of circumvallate papillæ, which stand out like a series of martello towers guarding a region sacred to the laryngologist. The sulcus may not always be visible, but the papillæ are, unless destroyed by disease. At the point of the V is the so-called foramen cæcum, or the opening of the thyro-lingual duct, occasionally the seat of cysts, and always permeable to a bristle for a greater or less distance.

A glance at the development of their parts will help us considerably.

The tongue is formed in two divisions, one a solitary median mass, known as the "tuberculum impar," situated in the angular space between the first and second visceral arches; the other and posterior one arises from the junction of the second and third arches just behind the tubercle, and which are at first separated by a forked elevation of the embryo's pharynx, known as the "furcula," but which uniting form the so-called base of the tongue, pushed the furcula backwards; this becomes developed into the

epiglottis, the ary-epiglottic folds and the arytenoid cartilages, whilst the median groove becomes the entrance to the larynx. Between the furcula and the tubercle is the "sinus arcuatus," into which opens the duct of the thyroid body; these eventually become the sulcus terminalis and foramen cæcum respectively.

The second arch becomes the anterior faucial pillar, whilst in the cleft behind it, is developed the faucial tonsil. The posterior pillar is subsequently formed from the palatine outgrowth of the maxillary process and not from the third arch. It will thus be seen that the two portions of the tongue have different developmental origins.

With regard to the structure, the contrast is striking even to the naked eye. In front of the sulcus are found conical and filiform papillæ with a few fungiform and circumvallate, whilst along the sides are scattered a few mucous and albuminous glands. But behind it we find something totally different.

First, there are the "lingual tonsils," clusters of lymphoid tissue with crypts or lacunæ lined with ciliated and stratified epithelium. This is an interesting feature and to which I would draw your attention, as I am not aware of ciliated crypts ever having been previously noticed. They are not found in the faucial tonsils, whose crypts are lined with much denser cells than the lingual. Next we notice the thyro—or sometimes called the hyo-lingual duct, lined with stratified columnar cells; and on either side, scattered irregularly, but in dense masses, are the mucous and albuminous glands of Salter and Henle.

The nerve supply is equally defined, for, whilst the anterior region has its afferent nerve in the fifth, the posterior part is supplied by the glosso-pharyngeal.

With regard to function, apart from the glandular suggestions, it is generally admitted that the true sense of taste, especially sensation of bitter, is located in the glosso-pharyngeal region, whilst the lingual gustatory is only responsible for sweet and ordinary sensations, *e.g.*, heat, cold, acids, &c. This is illustrated by the action of an Indian plant known as the "gymnema sylvestre," which destroys the appreciation of bitter and sweet taste only, and can easily be demonstrated by the application of electrodes to the tongue.

Pathologically, we find a marked contrast, for in the posterior half occur diseases with which the anterior is never affected, such as varicose veins, enlarged lingual tonsil, and other troubles arising in the lymphoid tissue. The ravages of lupus, tubercle, syphilis, also behave very differently in the respective situations.

A highly instructive and illustrative case is recorded in Vol. XX. of the "Transactions of the Pathological Society," in which a child died asphyxiated soon after birth, due to a tumour obstructing the glottis, which proved to be simply an enormous hypertrophy of the normal structure of the posterior portion of the tongue only, the anterior remaining healthy.

Finally, we have the different relative positions. When the tongue is passive, that part behind the sulcus is in the same plane as the anterior faucial pillars, whilst in deglutition it becomes wholly pharyngeal; there-

fore, may it not be suggested that all that portion of the tongue which is anterior to the sulcus or V line should henceforth be called "oro-glossus"; that part behind it to be described as the "pharyngo-glossus"?

A nomenclature which enables us to definitely localize the particular region of the tongue in question is undoubtedly required, and these few remarks are merely suggestive of a possible way out of the difficulty.

The PRESIDENT thanked Mr. Wingrave for his very interesting communication, which was of much more practical importance than perhaps might at first appear.

Mr. Wyatt Wingrave also made some remarks *on some Characteristics (Histological) of Laryngeal Epithelioma*; and demonstrated the following microscopic specimens, etc.: 1. *Lingual Tonsil*. 2. *Epitheliomata*. 3. *Membranous Laryngitis* (recent specimen from a case of Mr. Jakins).

Microscopic Specimens. Some characteristics of *Laryngeal* and *Pharyngeal Epitheliomata*.

The preparations illustrate a feature of the stratified form of epithelioma, which I have so frequently observed in these situations as to deem them worthy of your attention. The cells present a beautifully marked crenation at their borders, similar to the "prickle cells" of the malpighian layer of the epiderm, giving a "cogwheel" appearance. They are difficult of demonstration by the ordinary methods of staining, but are readily shown by passing the section through Gramm's solution of iodine after the hæmatoxyline.

It may be suggested that this peculiarity is due either to the rapidity of their growth, the specially moist conditions of their situation, or to the physical effects of the reagents employed. Whichever may be the true interpretation, it is a feature probably possessing diagnostic value.

Hypertrophy of the "Lingual Tonsil."

This specimen is from a lingual tonsil removed by Dr. Dundas Grant from a woman aged thirty, and shows the crypts lined by well-defined columnar ciliated cells. In some of the depressions the cilia have disappeared, and in the more superficial part of the crypt are replaced by ordinary stratified epithelium. This case evidently illustrates the persistence of a foetal condition, for it is extremely rare to find the lacunæ lined by ciliated bodies so late in life. I am not aware of this histological feature having previously had attention drawn to it.

Special Discussion.—The Necessity for Systematic Voice Training in Public Speakers, opened by Dr. SANDFORD.

Mr. President and Gentlemen,—I feel greatly honoured indeed in being asked to open a discussion upon this most important subject. I had only intended reading a "case illustrating the importance of systematic voice training, and the neglect which this subject has too commonly received," and was quite alarmed when I received a copy of the programme of this meeting yesterday to find the formidable task allotted to me. However, I took courage when I saw the names of those who will take part in discussing the subject, for I knew that our President, Dr. Dundas Grant

and Dr. Farquhar Matheson are good for any amount of interesting information, and they will amply make up for my shortcomings.

The case I have referred to is an extremely commonplace one, indeed, so much so, that I should on this ground apologize for bringing it before you, but that herein I believe lies its chief importance. I am quite sure that similar cases are an everyday experience with most of our members, and it is with a view to remove, if possible, one source of so much practice that I would ask your kind forbearance while briefly sketching its principal features.

The Rev. M. A., a clergyman recently ordained, of uncommonly vigorous and robust frame, consulted me in December last, stating that he was quite unable to discharge his public duties from a constant feeling of weakness—almost approaching to pain—in his throat, and frequent hoarseness, his voice suddenly “breaking,” and the effort to continue speaking being painful and ineffectual.

He had a few months previously entered on his first curacy with, as he said, a “tremendous voice,” but without any training. The church is a fairly large one, and the service is intoned. From the first Sunday he felt very tired, and his voice quite hoarse after the day’s work, but he continued for a month or two, hoping that this would “wear off.” He found on the contrary that he was getting steadily worse.

At last, owing to unusual pressure of work, aggravated by a slight attack of influenza, he broke down completely, even ordinary conversation being distressing and disagreeable from the croakiness of his voice; and though he could still emit a few clear notes in a loud voice at high tension, this could not be sustained for any length of time.

I found his pharynx and larynx extremely hyperæmic, with considerable follicular hypertrophy of the pharyngeal mucous membrane and the tonsils. The cords were slack, with an utter want of tone.

Having relieved the local symptoms by the use of the usual sprays, etc., as well as by the application of the galvano-cautery to the enlarged follicles, I advised the patient before resuming work to seek instruction in the proper use of his exceptionally powerful vocal apparatus. He therefore placed himself for a month under the guidance of Mr. Behnke, whose scientific method of teaching, and admirable system for bringing out the voice, I have had an opportunity of observing.

The result was eminently satisfactory. A few weeks after returning home Mr. A. wrote that he himself and many members of his congregation were quite astonished at the change in his voice, and at the ease with which he could fill the church while speaking in his natural key. He felt quite fresh after his Sunday work, and an utter absence of the voicelessness and general physical fatigue previously resulting from the sustained effort. I saw him a few days since, and he told me that he continues to improve day by day, and finds life quite a different thing from what it had been a few months previously.

I believe that this case is typical of many, and that every day young men are launched from academic into public life, crammed it may be with useful information and brimming with original ideas, but handicapped by never having had their “mouths made.” They have never

been trained to use their voice skilfully, and when the pressure comes, the vocal organs break down under the strain. Public speaking is as different from ordinary conversation as rowing is from mere paddling, or as racing is from walking, and special physical training is as necessary in one case as in the other. The tongue may be as "a sharp sword," but even this latter is a comparatively feeble weapon under the sway of one untrained in its use. In the case of the untrained voice, the mischief does not stop at mere feebleness. Many chronic and wearisome throat troubles are due directly or indirectly to (or at least are kept up by) the constant strain of injudiciously used muscles. This influence is of course greatly aggravated in our damp, relaxing, rheumatic climate by atmospheric conditions. No one who has not experienced it can realize the depressing effect, both mental and physical, produced in the individual by the fatigue and vague ever-present laryngeal pain resulting from unduly strained muscles.

I am quite sure that some suggestion from this influential Association would have considerable weight in impressing upon educational governing bodies the importance of encouraging the study of voice cultivation. Attention to the subject would, I am convinced, diminish at least one fruitful source of throat trouble, and prove a boon to future public speakers, more especially in the divinity and other schools, where students are presumably prepared for a life in which the art of speaking in public is one of the most important elements in their education.

A special course in scientific vocalization, apart from elocutionary or other rhetorical embellishments, would be invaluable to most men preparing for public life, and a recommendation to that effect from this Association would at least bear the stamp of sincerity and unselfishness, for I have no doubt that such a course of instruction would deprive us of many patients.

Dr. DAVIES, of Newport.—*Stammering induced by Whooping Cough.*

My eldest son, Howard, though backward in talking as a baby, never had any speech difficulty until he had, during his fourth year, a severe attack of whooping cough attended by considerable pyrexia.

As there was no hereditary tendency in either parent, I paid very little attention to it, beyond correcting him, hoping that as he gained strength and grew older he would improve; but, instead of growing out of it, the inclination to stammering, slight at first, became a confirmed habit, and he gradually became worse until the time when he commenced to learn. The little difficulty had then grown into a very serious obstacle in the way of his studies, and was assuming such a serious aspect that I began to make enquiries among my medical friends for someone who could take the child in hand and treat him rationally, scientifically, and free from empiricism. The answers which I almost invariably received were, that the treatment of stammering had been practically ignored by the profession, and was mainly in the hands of quacks. Although determined not to patronize empiricism, I was almost giving it up in despair, when I quite accidentally heard of Mr. Lennox Browne as having operated on a little boy at Frome, and whom Mr. Behnke had subsequently cured.

I at once sent Howard to Mr. Lennox Browne, and he very kindly performed an operation on his throat (removal of adenoids and a shortening of a very relaxed uvula), and advised my sending him to Mr. Behnke for at least three months. He was almost immediately sent, and commenced his residence just after his ninth birthday.

The first thing which Mr. and Mrs. Behnke appeared to do, was to inspire the child with confidence in himself and in his teachers; to make him feel quite at home and perfectly happy.

The next thing, as far as I could note, was to ascertain exactly, or as nearly as possible, where the defect lay, and its probable cause. They immediately discovered that the diaphragm was exceedingly weak, and that Howard had acquired a very vicious habit of talking during inspirations, and I may say in passing that this was an attempt of his own to cure himself under home teaching.

The moral effect of knowing that he *could* speak like other boys, combined with Mrs. Behnke's almost magical influence over him, together with the diaphragmatic drill and the placing all the other chest muscles at rest in the recumbent position, was so pronounced that in a few days, while lying down, he was able to go through his vocal exercises and could read easy books with scarcely any stammering or hesitation. This improvement was the more remarkable, as for years before he went under treatment, the moment he commenced reading aloud or reciting, the stammering and facial contortions were most painful and distressing to witness, and undoubtedly had a very bad moral effect upon him; from being naturally high-spirited and inclined to be despotic he was becoming shy and timid, and from being vivacious and talkative was becoming morose and silent. But under Mrs. Behnke's care Howard very soon acquired such confidence in his own powers of speech as to be able to take messages and do some shopping for her, which by the way was part of the treatment, and altogether assumed a much more manly, or shall I say boyish appearance.

At the expiration of the three months I am pleased to say that Howard was practically cured. He could speak, read and recite with ease, and only occasionally hesitated or came to grief slightly by carelessness in carrying out his instructions. For some time after his return home, the diaphragmatic drill and vocal exercises were most successfully continued by his mother, who had been specially instructed therein.

On one or two occasions when out of health, and during and after an attack of influenza he appeared to lose ground, but soon picked up again with care and a little practice in the exercises.

Since my attention has been drawn to stammering by my son having been a sufferer, I have heard of and come across several cases which have originated during an attack of whooping cough. Can this possible connection between the two diseases be due to over-distension and consequent partial paralysis of the diaphragm? Paralysis of the bladder from over-distension is too well known and recognized to be disputed, and the over-distension and consequent permanent weakness of the abdominal muscles in pregnancy is also a too common and unfortunate occurrence to require any comment. Is it unreasonable to suppose that the same thing takes place

in some of these severe cases of whooping cough in children whose muscles are soft and flabby?

I should be very much interested to know if other of my medical *confreres* have observed this relationship between the two diseases.

If it can be proved that this hypothesis is impossible and untenable, can the stammering be caused by some slight brain lesion induced by the violence of the cough? or may not its severity have some injurious effect upon the nervous system through the emotions?

These cases are so numerous, so distressing, and so detrimental to the success in life of many who are otherwise healthy, capable of, and anxious to take their part in the battle of life, that I hope the disease and its curability will be recognized by the medical profession, so that the mental and physical sufferings of these cases, as well as their social disabilities, may be brought prominently before the benevolent and the philanthropic of our country. Then, I trust that the day may not be very far distant when we shall have a home or homes for their special treatment. [This little boy was then introduced to the Society, and created a great impression, not only by the absence of any speech impediment, but by the clearness of his enunciation of every syllable, and by the resonance and carrying power of his voice.]

Dr. FARQUHAR MATHESON, in his remarks, stated that in the training of the voice the early recognition of impediments or of abnormal conditions of the vocal mechanism, from their great importance and prevalence, demanded the full attention of an association like this. The subject, hitherto, has been altogether overlooked and neglected by the medical profession, and has been considered scarcely within the jurisdiction of the surgeon or physiologist. The development and training of the vocal organs, whether imperfect or normal, have hitherto almost exclusively been undertaken by teachers of reading, elocution and music. Although many of these gentlemen have done excellent work in this direction and are highly accomplished and successful in their art, it is clear that their training and education do not qualify them to deal with that very numerous class of voice imperfections arising from obstructions or impediments in the upper air-passages or malformation of the throat, palate, etc. This latter class of cases can only be successfully dealt with and improved by the skilful surgeon in the first place, and in a later stage by the assistance and co-operation of the elocutionist. Gentlemen like himself, who came daily in contact with numerous cases of diseases of the nose and pharynx, are constantly impressed with the deplorable imperfections of voice resulting from obstructions in these cavities, which at an early stage are quite amenable to skilful treatment. Enlargements of the turbinated bodies and deviation of the nasal septum were the most frequent causes. Whilst listening lately to a debate in the House of Commons he could not help observing the loss of force and attention which one or two of the speakers sustained in the delivery of otherwise capital addresses, through some impediment in the nasal passages, which could in their earlier days, or even now he thought, be easily rectified. But being somewhat misled by the title of the discussion he was not prepared to enter into details. He, however, again recommended the

subject, as one of much interest and importance, to the notice of their Society.

Dr. Matheson offered some remarks on a collateral subject, to which he has given some attention, viz., stammering. Although he had perused almost the whole literature of the subject, he was bound to say that no full and satisfactory explanation of the causes of this malady has been given by any author, and few of the numerous systems advocated by different teachers for the cure of stammering are based upon sound and rational principles. In studying the conditions as regards health and the clinical history of every case of stammering, it will be observed that the principal feature presented is a highly nervous disposition—excitable, timid, and easily impressed. In this respect the malady has many points in common with many other nervous diseases, such as epilepsy, chorea, and even infantile rheumatism. In addition to this neurotic, or constitutional predisposition, there is almost in every case of stammering a second or exciting cause. These are very numerous, and vary in almost every case, and may be a sudden fright, a fall on the head, the irritation of teething, pharyngeal or gastric inflammations, diphtheria, chorea, etc., causing involuntary and spasmodic action of certain muscles over which the child has lost control. Whooping cough, especially if associated with measles, was a frequent exciting cause. But it has been ascertained beyond question from actual examination of stammerers that the principal factor in the causation of the disease is the existence of adenoid growths in the nasopharynx, and obstructions and irregularities in the nasal cavities. These conditions are responsible for at least fifty per cent. of the cases we meet with, and the statement is proven and supported by the fact that upon removal of the nasal obstructions and growths the stammering is immediately relieved and improved, and in some cases cured, even without the aid of a teacher. It is also a fact that many stammerers suffer more or less from deafness. The subject and the views expressed still demanded further study and attention by the physiologist and surgeon, and with the co-operation of the skilled teacher it could be confidently hoped that many sufferers from stammering and other voice defects would be rescued from a painful and distressing imperfection.

Dr. ALTHAUS expressed the great interest he felt in the subject of the papers that had been read, and in the demonstration which they had just witnessed. It was really wonderful to hear the lad speak as he had done before such a large assembly. He had for some years past been led to form a very high opinion of the physiological basis and practical value of Mr. Behnke's method. It was not so much a method of training certain laryngeal and other muscles as a method for training a definite nerve centre, viz., that of speech. He had been confirmed in that view by noticing that an efficient training of this nerve centre tended to exert a beneficial influence upon other nerve centres. Certainly the cases he had sent to Mr. Behnke were not cases of simple stammering, but of stammering combined with mental instability and a general deficiency of brain power. One was a young man, twenty-four years of age, sent to Mr. Behnke some eighteen months ago, almost as a forlorn hope. He was the son of a gentleman of limited means, and had had an unfortunate career at school and college, being

ridiculed by everybody he met. At that time he gave the impression to a casual observer almost of imbecility. Still, there was something to work upon. He could read and write tolerably well, and had a smattering of Greek and Latin. The question was whether he could be trained sufficiently to earn his living. Not only was there a marked improvement in articulation after six months of Mr. Behnke's treatment, but the patient had acquired a different aspect, was much more intelligent than before, and had lost all those little absurdities and mannerisms which formerly told so much against him. He had eventually been able to accept a situation as teacher, the duties of which he was reported to be discharging very creditably. The improvement all the way round in the case just mentioned could not be explained if we looked upon Mr. Behnke's method as one for training muscles only. It did much more than that, and the results of training of the nerve centres in this case had surpassed his expectations. Dr. Althaus also referred to another case, not quite so severe, in a boy aged nine, observing in parenthesis that children were always easier to train than adults. This lad had always shown a considerable amount of mental deficiency. The way in which he answered questions and looked vacantly round him when spoken to, and the awkwardness shown in spelling or writing, were those of a not very advanced child of five or six. He had an opportunity of seeing that boy again, after he had been six weeks with Mr. Behnke, and the result was marvellous. There was not only an immense improvement in articulation, but the whole aspect of the case had been changed. There was a long neurotic history in this patient's family, which made the case a particularly difficult one; and the fact that in so short a time such a radical change should have taken place, spoke volumes for the efficiency of the method of training to which he had been submitted. Dr. Althaus expressed his pleasure that the subject had been brought forward at this Association, and he would like to impress upon them the practical value of Mr. Behnke's system, not only in cases of ordinary stammering, but also in those in which stammering was only one of the symptoms of general nerve disturbance and instability.

Dr. DUNDAS GRANT said he took part in this discussion chiefly because he wished to bring before the Society a case which they had already seen last year. After one of their meetings in the past year they had had the privilege of listening to an address on stammering by Mr. Behnke. On that occasion he (Dr. Grant) had selected at hazard from among his out-patients a case, totally unknown and unexpected, of severe stammering; as severe a case as could well be met with. The patient was altogether incapacitated from any occupation involving oral communication. He "sprang" this man on Mr. Behnke, who at once went through his usual probatory examination, with a result which was astonishing to them at the time. He felt very strongly that it would be a pity that such a discussion should be allowed to fall to the ground for want of the ventilation such an association as theirs could give it. It was by no means a merely medical question, nor a question affecting only throat specialists, though it was one, nevertheless, which at a meeting of throat specialists could be most properly discussed.

In their dealings with the outside world they came across glaring cases in which the want of training for public speaking made itself apparent. It was a political, a social, and even a theological question. At the House of Commons, or at its humble analogue the Codgers' Hall, one could not but be struck by the fact that some speakers there often utterly missed their points from the very ineffective way in which the matter was brought forward. Others again, with very little to say, managed to score, owing to their attractive manner of delivery. In this respect their Irish brethren ran away ahead of them all by the fascinating manner in which they put forward their ideas. The English came much behind, and he would warn them that if they wished to keep whatever political supremacy they might be entitled to, it was important that their speakers should be armed with vocal qualities which would enable them to meet the eloquent advocates of Home Rule or other measures on equal or advantageous terms. It was essential to the welfare of the community and the race that certain questions should be thrashed out upon their merits and not condemned—practically unheard—on account of the vocal defects of those who were charged to defend them. The same remark would apply to all the liberal professions. Those who attend places of worship were often very much shocked by the feeble attempts at elocution to which they were constrained to listen. The Church would have to bestir itself, and would have to make its ministers take lessons in elocution before entrusting them to advise to better modes of living. Until it did so, "clergyman's sore throat" would not disappear, and the Church would not realise the amount of good influence of which it was capable.

Passing on to discuss the causation of stammering, he said the causes were so numerous that they might be found wherever one looked, whether locally in the throat and nose, or constitutionally in the general health and the nervous and other systems.

The statistics brought forward by Dr. Matheson were certainly interesting, but, in order to appreciate their full significance, it was necessary they should know the frequency of adenoid vegetations in stammerers compared with school children generally, and the frequency with which adenoids were accompanied by stammering. Then they would be in a position to decide whether the connection was accidental or essential. In reference to the neurotic element, he pointed out that there was a certain cerebral irritability capable of inhibiting the centres for speech, just as the same cerebral irritability might inhibit that centre which, in its turn, inhibited micturition. The great object in view of this was to divert the surplus or irregular cerebral energy into another area. Mr. Behnke's was certainly a useful practical classification. He applies the diaphragm drill tentatively in all cases, and produces an improvement in a large proportion almost immediately. These cases he classifies apart, and gives a favourable prognosis as to improvement under respiratory gymnastics. At the same time Dr. Grant did not hesitate to affirm that there was something more in this system of training than a mere mechanical working of the diaphragm. He did not believe that it was possible for everybody to take up this plan of treatment and work it as Mr. Behnke did. There was an individuality about Mr. Behnke, and it

was to be hoped that he would not only provide for the relief of individuals, but would take care to train up around him teachers capable of carrying on his good work for the benefit of sufferers at large. He could evidently not treat all the stammerers in existence, and he thought his system ought to be extended and perpetuated.

[The patient, to whom Dr. Grant had alluded, was then brought before the Society, and was asked to recite aloud and to sing musical notes. He spoke in a measured tone, free from any suspicion of stuttering or hesitation, and in reply to a question, he said that since the course of training his singing voice had markedly increased in volume. Dr. Grant pointed out also that his general physique had improved *puri passu*.]

MR. EMIL BEHNKE—Mr. President and Gentlemen,—As you have kindly invited me to take part in this discussion I desire to avail myself of the opportunity for the purpose of once more emphasizing the three chief points upon which we insist in our teaching :—

They are, first, the necessity for medical co-operation ; secondly, the necessity of diaphragmatic drill : and thirdly, the necessity of paying proper attention to the mental aspect of stammering.

I. (a) The necessity for medical co-operation is proved anew by a case which is at the present time under the care of my wife, who attends to all lady-pupils and young people. It is that of a little boy who was utterly unable to pronounce any vowel without prefixing it with a hard *g*, or a *k*. Thus, instead of saying "I am going out," he would say "Gi gam going gout," etc. Now the elocutionary remedy for this defect consists in exercises for educating the soft palate, and for giving the speaker proper control over it. We found, however, that, in this particular case, the soft palate was so weighted by enlarged tonsils and an elongated uvula that our efforts to enable the little patient to raise it to any considerable extent were fruitless. We therefore communicated with the parents, who took the child to Dr. Greville Macdonald. This gentleman discovered that, in addition to the enlarged tonsils and the elongated uvula, there existed a considerable mass of adenoid vegetations which, extending towards the Eustachian tubes, were responsible for a certain amount, not exactly of deafness, but of want of power to appreciate the refinements of speech.

The child was operated on accordingly, which not only removed the direct obstacle in our way, but also a source of perpetual irritation, which would undoubtedly have constituted an insuperable bar to the boy's progress. Under these new conditions, however, he quickly responded to teaching, and learned to raise the soft palate smartly, with the result that he is now able to utter his vowels without an abnormal consonantal prefix.

I think you will agree with me that it would be difficult to find a case more strikingly illustrating the necessity for medical co-operation than this.

(b) Now, with regard to diaphragmatic drill, it has been suggested that its beneficial effect upon a stammerer's difficulties largely arises from the fact of his attention being thereby diverted from his speech trouble. I

have no doubt this is the case to a certain extent ; but there is something beyond it. Respiration, although a perfectly automatic process, may be trained and brought, more or less, under the control of the will.

But it is possible to accomplish more difficult things than this. For instance, I have trained myself to get control over the tensors of the membranes of the tympana for the purpose of shaking off a certain amount of deafness which frequently troubles me ; and it is on record that Dr. E. Weber caused his heart to stand still after a prolonged course of training for slowing the pulse, and that he very nearly died of the experiment.*

The extent to which control may be obtained over the action of the diaphragm is astonishing, and can only be appreciated by those who have seen obstinate cases under treatment.

(c) With regard to the mental aspect of stammering, it has been pointed out to me that the difficulty arises in the cortex of the brain rather than in the medulla. I have always understood that the cortex has to do with language, and the medulla with speech ; and stammering is clearly an affection of speech, and not of language. It is not, however, of any practical importance to me as a teacher whether the one theory be right or the other. My great point is this : it is a *sine quâ non* for the teacher to gain not only the confidence, but even the affection, of his pupils, and to acquire the most perfect and absolute control over them, so as to be able to lead them to cultivate habits of calmness and of self-reliance. Failing this, all mechanical exercises will be utterly wasted.

So much for stammering. It should be distinctly understood, however, as my friend and fellow worker, Mr. Lennox Browne, has often insisted, that the same principles underlying the treatment of this defect also underlie the proper training of voices for speaking as well as for singing.

It is hardly necessary for me to call the attention of a medical audience to the obvious fact that the teacher of voice culture is quite unable to do himself justice while the vocal apparatus of the pupil is not in a normal condition ; but I may, perhaps, mention to you a case in point, which I had recently under my care, and which is instructive as well as amusing. I was consulted by an actor who wished to improve his voice, and I soon discovered that he suffered from a want of nasal resonance, which was, no doubt, caused by some obstruction of the nasal passages. Upon testing him with a lighted match I found that he was unable to blow it out through either nostril, and I advised him to consult a doctor before commencing lessons, which he did accordingly. To my astonishment the doctor ridiculed the idea of there being anything the matter with his nose. But, in spite of my best endeavours, I completely failed to increase the resonance of my pupil's voice, and I urged him once more to consult his medical adviser. The doctor, however, adhered to his first opinion, and I parted with my pupil, feeling that he was wasting his time and money by taking lessons which were perfectly useless. He then went to America, and after his return home gave me a

* "De Pulsu resorptione, auditu et tactu," by Dr. Ernst Weber. Leipzig, 1834.

call, when I was struck by the wonderful improvement in his voice, and said to him at once, "Ah! now you have had your nose operated upon." This greatly astonished him, and he said that he should not have thought I could have immediately discovered that; but it was a fact. He had consulted a throat specialist in New York, who discovered that his nasal passages were almost choked with vegetations, so much so that it took several sittings to remove them all by means of the galvano-cautery. The effect of this operation was not, of course, immediate; but after the lapse of some six or eight months, when the mucous membrane had assumed a normal state, the improvement in his voice was simply marvellous.

II. Now with regard to breathing. It is quite clear that the management of the breath is of as much consequence to the voice-user as is the management of the bow to the violin player; and this management can only be obtained by getting proper control over the diaphragm.

Time will not allow me to enter fully into this subject, but I may relate to you a conversation that took place between a medical practitioner, who was a pupil of mine, and myself. He wanted me to explain to him why I considered diaphragmatic breathing so infinitely superior to clavicular breathing for voice use. I asked his permission to answer his question by giving him a demonstration, and then sat down to the piano, singing a great number of staccato tones, inviting him to watch me very closely, and to discover, if he could, my breathing places. He failed to do so, and was surprised to find, by placing his hand on my abdomen, while repeating the experiment, that I was able to take a short inspiration before *every single tone*. He admitted that such a result would be quite impossible by means of clavicular breathing, and that I had perfectly answered his question.

III. Finally, with regard to the mental aspect. All exercises should be carried on under the direct influence of the mind, and mechanical practice alone will never be satisfactory. This is, however, a vast subject, upon which a large book might easily be written, and I am afraid that I have already taken up far too much of your valuable time.

I will, therefore, conclude by thanking you very sincerely for the generous support so many of you have kindly extended to me this afternoon, and by also tendering my grateful thanks to the editors of the JOURNAL OF LARYNGOLOGY for the signal honour they conferred upon me, as a non-medical writer, by devoting a leading article to the consideration of my paper on "Stammering."

MR. MAYO COLLIER, speaking to the subject of costal *versus* diaphragmatic breathing, pointed out that in the last edition of Mackenzie's "Hygiene of the Vocal Organs" there was a chapter written by himself which had especial reference to the method of breathing related on this occasion by Mr. Behnke. Also in one of the numbers of the JOURNAL OF LARYNGOLOGY they would see that he had endeavoured to prove mathematically that the method of breathing described by their President and Mr. Behnke was not only not the correct one, but was positively incorrect. In the article to which he had referred he pointed out that the old Italian masters taught that one should take in air with a concave stomach. In Greek statues the performance of great efforts was depicted

with a hollow abdomen. Moreover, in divers the method was to draw in the abdomen and dilate the chest. He had referred in that article to Mr. Behnke's book and to the practice taught at the Paris Conservatoire by Mandl and others.

Mr. Collier then demonstrated on the blackboard by the aid of the formula $V = \frac{11}{3} \pi r^2$ that the extra breathing space obtained by depressing the diaphragm to its fullest extent was considerably less than that available if the base of the thoracic cone were enlarged to a very slight extent, by contracting only those fibres of the diaphragm which pulled the lower ribs upwards in the proportion of 300 cubic inches to 324. That showed that the teaching of the old Italian masters was right.

The PRESIDENT said Mr. Collier had alluded to clavicular and costal breathing as if they were interchangeable terms, but as a matter of fact they were quite distinct. Diaphragmatic breathing *must* be followed up by costal extension, and this was always taught by Behnke and himself, but it was quite another thing when it became a question of carrying on the costal distension till it led to the raising of the clavicle. When breathing was commenced by depression of the diaphragm, and extended to rib breathing, the fault of elevation of the clavicle was barely suggested, and diaphragmatic drill was indeed a correction of that fault if it existed: but breathing commenced by the method called costal was very apt to lead, and almost always did lead, to elevation of the clavicle, a mechanism which, to quote Morell Mackenzie, "is seldom brought into play, except in the dire struggle for breath when suffocation is impending."*

He did not care a fig for the figures on which Mr. Collier's demonstration was based, and he insisted that the spirometer afforded a much more reliable test of breathing space than any mathematical calculations which were based on a series of unproved and unprovable assumptions. He had employed this test for years with results which had never failed to confirm his views. He asked anyone to try the effect with a spirometer in a pupil taught by Mr. Behnke to use the diaphragm, and one who did not use the abdominal muscles. He confessed that he did not understand Mr. Collier's figures, but he flattered himself he did understand the readings of a spirometer. He mentioned the case of a young man, engaged in evangelical work, who came complaining of weakness of voice. He then spoke in a childish treble. The spirometer gave 200 instead of 260 cubic inches, which was his mean according to Hutchinson's tables. Under diaphragmatic training he acquired a man's voice, which he had never possessed before, and at the same time he gained 60 cubic inches of breathing capacity. This case was but one of many. Another case was that of an old lady with complete loss of voice. This was restored by faradism, and she then underwent training. The respiratory powers were so feeble that she hardly moved the needle of the spirometer, and with every effort only registered 9 cubic inches. After six daily lessons she scaled 90 cubic inches, and held her restored voice. He further related the case of a minor canon of St. Paul's Cathedral, who had a breathing capacity in excess of the normal, but did not know how to economize it,

* "Hygiene of the Vocal Organs," Seventh Edition, 1890, p. 84.

and therefore failed in "attack" of his notes. Under proper treatment he entirely recovered, though he had almost lost his singing voice.

There was a class of cases arising from fatigue of the voice, called by Morell Mackenzie "spasm of the tensors," but better denominated by Prosser James as "stammering of the vocal cords." He remembered two remarkable cases of this in clergymen. The treatment in past days consisted always in faradization and the administration of nerve tonics. They were just such cases as those brought forward by Dr. Sandford. Sometimes the subjects of it could speak with ease in ordinary conversation, but the moment they tried to do duty control of their voice entirely failed them, resulting in spasmodic treble with intervals of hoarseness. The President had sent one such case, afflicted for years, to Mr. Behnke, and in a very few weeks he was able to preach in Chichester Cathedral, and had since done regular duty. Another was the son of an eminent physiologist, who had to give up ministerial work entirely from failure of his voice. He had been sent abroad, but had never regained his voice. He was then about twenty-seven. Time passed on, and when he was forty years of age he consulted the speaker. In reply to a question as to what were his special voice occupations, he said he lectured on religious history and Hebrew. Curiously enough, he had no difficulty with the Hebrew, but the history tried him terribly. This was explained by the fact that in the latter he stooped a good deal to consult notes as to facts and dates. This was in 1884. He was put under diaphragmatic drill, his breathing at that time being very shallow, and accompanied by much clavicular elevation. As he went on learning, he not only lost all the spasmodic speaking, but developed a singing voice, and later on he came to ask whether he could not go on further for the purpose of advancement in this gift. The President stated that he would be very pleased to see this matter put to the test, and he asked Mr. Collier whether he would submit to that of the spirometer.

Lastly, with relation to this point he denied that the old Italian masters really taught the method which Mr. Collier supposed. Certainly those who were supposed to have their traditions, such as Lamperti and his disciples, taught that respiration should be commenced by descent of the diaphragm, and this not only for a fuller inflation of the lungs, but for the purpose of steadying and controlling the exit of the air in attack. Mr. Lennox Browne admitted that his was not the system taught at the Paris Conservatoire, and the result was that French voices, as a rule, fell to pieces more quickly than others who adopted the more rational mode of training, and were noted for the obnoxious fault known as *vibrato* or *tremolo*. It was this circumstance that led Mandl to write his well-known treatise, in which he proved to demonstration that fatigue of the voice was mainly due to improper breath management.

The question of stammering was very interesting to him, because, as already stated by Mr. Behnke in his very practical address, there was a great analogy between that condition and the faults of voice in adult life. Some he had alluded to, namely (1), an inefficient filling of the lungs—imperfect bellows power—and (2) a want of economy in emptying the lungs for the purposes of voice—a waste of bellows power. Of

those that remained, there were (3) the carrying *up* of the lower register of the voice instead of bringing the upper one *down*; this was quite as frequent a fault in speakers as in singers, and was responsible for what is known as a "hole" in the voice; (4) ignorance of how to use the soft palate, and other conditions leading to deficient resonance; (5) speaking in an unduly loud voice; (6) in an unduly high pitch of the voice; these two were by no means one and the same thing. Lastly, there was an affected manner of speaking, which he ventured to think was peculiar to the clergy, and more especially to the English clergy. It was not common to Nonconformist ministers, and was quite absent in the orations of barristers and lecturers.

All the other faults named, and others which for want of time could not be even mentioned, were responsible not only for much ineffective speaking, but for many diseases of the throat. It was the duty of the throat specialist in these cases, as of any doctor in all other cases, when he had cured the disease, to indicate to his patient how to avoid recurrence, and in the case of the suffering voice-user this could only be done by correction of his faults at the hands of a voice trainer. He (the President) was delighted that this subject had been suggested and so well introduced by Dr. Sandford, and he was more than gratified at the ample testimony given by so many Fellows to the power possessed by his friend and co-author, Mr. Behnke, to supplement the efforts of the doctor. For himself, he could but say that, whereas before he knew Mr. Behnke he was only able, as were others, to give temporary relief to clergymen with sore throats, since he had had the advantage of Mr. Behnke's co-operation, a very large majority of his cases had been permanently cured of their ailments, and their important duties had, therefore, been performed not only with comfort, but with increased efficiency.

Dr. SANDFORD then moved, as a formal resolution, that "It is the opinion of this Association that insufficient attention has hitherto been paid to the subject of voice training as a branch of education, especially as regards preparation for public speaking. Also that in addition to increased personal comfort and public advantage to be obtained from proper voice cultivation, many serious diseases of the vocal cords would be prevented by methodical training in their use."

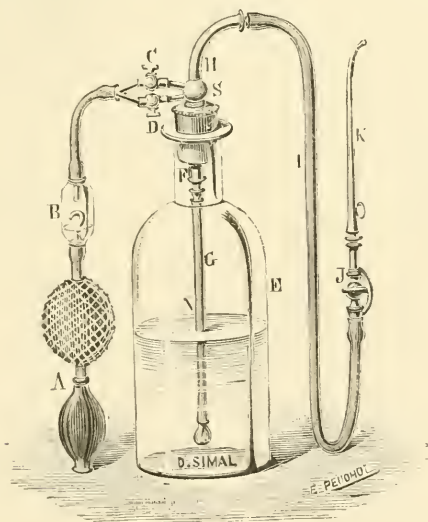
This motion was seconded by Dr. DUNDAS GRANT, and carried unanimously.

A vote of thanks was also accorded to Dr. Sandford for having brought the question forward, and to Mr. Behnke for having contributed his valuable remarks to the discussion.

THE SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY,
OF PARIS.—Continued.

An Apparatus for giving Insufflations of Antiseptic Air, or Medicated Vapours and Injections into the Tympanic Cavity through the Eustachian Tubes.
By Dr. GILLES.

Use of the Apparatus.—Irrigation of the tympanum through the Eustachian tube in suppurative otitis of the middle ear or of the mastoid cells is by air or watery douches, and therefore necessitates special apparatus for each. The apparatus presented is designed to avoid multiplicity, and to distinguish its double function I have called it the “Insufflato-Injector.” It permits either antiseptic air, medicated vapour, or appropriate liquids to be thrown into the tympanum through the Eustachian tubes.



Description.—The apparatus consists of three principal parts: (1) a special bellows, (2) an intermediate piece, (3) a terminal portion or catheter carrier.

The bellows is fixed to the middle piece, which is adjusted to a bottle, which in turn is attached to the catheter carrier by a special system of caoutchouc tubes. The two last pieces are of metal. If a catheter is added to the terminal portion, the apparatus will be as in the first figure.

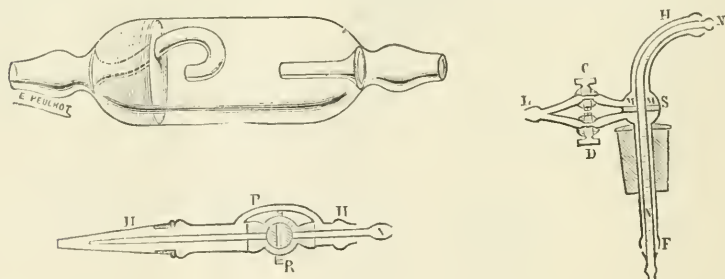
1. *Bellows.*—Richardson's double ball, with a reservoir charged with a volatile antiseptic solution, attached to its extremity, constitutes this part. The antiseptic reservoir is the little glass ampulla fixed to this bellows. Five years ago I devised this, and presented it to the International Congress of Laryngology and Otology on October 18, 1889, *à propos* of the communication of Dr. Ladriet de la Charrière, who kindly mentioned it. It is a closed glass cylinder traversed by two tubes inside. One is rectilineal and in the axis of the cylinder, and of one-third the length of this axis; the other is curved, so that its internal orifice also lies in the

axis of the cylinder, the end being about half a centimètre from the orifice of the upper tube. Between these tubes and the walls of the cylinder are *cul-de-sacs* for liquid to lodge in the various movements which may be given to the cylinder and without possibility of its escaping. The ampulla must, however, only be one quarter filled, for if greater it might escape through the tubes. These latter are continued into olivary enlargements and the volatile liquid poured out by the rectilinear tube can escape only as vapour under the action of a current of air. Thus intercalated between the Richardson bellows, or a ball and catheter, the medicated reservoir replaces the large apparatus of Bonnefont and similar apparatus. It may also serve for other uses, *e.g.*, insufflation of powders and inhalations.

The small size of the apparatus for insufflation makes it easily transportable, and it has the advantage of costing very little and fulfilling all the conditions of its predecessors.

2. *Middle Portion.*—For irrigation it is necessary to apply the bellows to the middle portion, constructed as follows:—

Two tubes with stopcocks C D spring from one olive, L, to which is fixed the bellows, one tube opening into the upper part, and the other into the lower part of a hollow globe. This is continued at its upper part into a large tube, H,



which, at first vertical, soon becomes horizontal, and at its lower part into a similar tube, H', of the same calibre; a washer and a ring, or a perforated caoutchouc cork, fixes it into any bottle. The upper globe is divided off from the lower by an equatorial partition, M M. Crossing the centre of this and joined to it is a tube, N N, prolonged into the other tubes, H H', which it projects from at each end two centimètres, fixed solidly to their extremities. The lower end carries a caoutchouc tube long enough to reach to the bottom of the bottle.

System of Caoutchouc Tubes.—There are two tubes of different calibre, the larger enclosing the smaller, the larger being continued on to the catheter carrier, the external tube of which is of the same diameter, the smaller tube being continued exactly the same on to the inner tube of the middle portion.

Catheter Carrier.—An external tube joined on to the external caoutchouc tube encloses a second larger by two centimètres behind, which at this place is attached to the small caoutchouc tube. The middle part of the catheter carrier has a construction enabling the instantaneous arrest of the liquid contained in the inner tube, and this is essential if the injection is to be followed by an insufflation. This is obtained by making the inner or water tube leave the axis of the air tube, and is placed so as to allow of a stopcock, R, and it afterwards joins the water tube again. At the point opposite to where the water tube leaves the axis of the air tube this last is reduplicated. Its upper part soldered to the water tube forms a *cul-de-sac*, its lower free part open at the point of exit from the small tube is

closed and continued by a tubular loop, P, which rejoins the body of the catheter carrier at the point where the water tube retakes its former direction. The two concentric tubes terminate in the catheter carrier. The external tube has a screw for a small cylindro-conical piece which carries the catheter, the internal tube being carried nearly to the extremity of the cone. This apparatus has been constructed very carefully by M. Simal.

Uses of the Apparatus: (A.) Insufflation.—Open the upper stopcock C and close stopcocks D and F. Air drawn by the bellows A is charged on passing the reservoir B with antiseptic vapour, and through the tube C enters the upper division of the globe S. Shut off from the lower section of the partition M M, it can only issue through the upper tube H. It flows thus through the ring formed by the tubes I and N to the catheter carrier, follows the loop P, and exits by the cone to the catheter K.

(B.) *Irrigation.*—Close the stopcock C, and open those D and R (opposite to insufflation). The air compresses the liquid contained in the bottle E, which flows through the tube N to the catheter, following the direction from N to R, where it is stopped by the stopcock.

(C.) *Douche.*—If a copious douche is required, open the three stopcocks C, D, R. Then the current of air breaks the jet of liquid going out from N, and projects it from the catheter as a coarse spray. If we wish immediately to return to insufflation, close stopcocks D and R, and air alone will pass out. If the stopcock R of the catheter carrier were not there, we should have to drive out all the water in N before obtaining an air douche. The loss of time is prevented by the stopcock R. This latter being open, and the tube N empty, there is produced during insufflation the return of a certain quantity of air in the bottle by the tube N, to the detriment of the power of insufflation in the tympanum, a serious inconvenience which, along with the impossibility of immediately arresting the injection, demonstrates the necessity of the stopcock R.

Method of Employment.—By a loop fixed to the bottle neck: this is hung from the left forearm, the bellows is held in the left hand, and the catheter carrier and catheter in the right hand, and this maintains the catheter in place, the left hand opening and shutting the stopcocks. Suspending the bottle from the wrist has many advantages; it cannot be upset, and sudden involuntary traction upon the tubes is not produced, and the length of the tubes so as to increase the intensity of the douches can be easily regulated.

General Remarks.—The addition of a reservoir of volatile antiseptic is of prime importance. If it is necessary to insufflate air into a purulent cavity, it is indispensable to rid it of any noxious germs, which is obtained by the mixture of air and antiseptic vapour. The reservoir, being one with the bellows, follows the movements of the latter without possible exit of the liquid, and it gives facility of manipulation. Bronner, of Bradford, at the International Congress of Paris, presented an instrument for ultimate douching of air and liquids. This apparatus differs essentially from the insufflato-injector, the air entering the catheter by a single tube without asepsis. The water tube, also single, enters the catheter, which is provided with two mouths. The apparatus, besides necessitating a special catheter, can only give as an injection a "spray." This, however, was the object sought by his apparatus. He said, in reference to the usual practice:—"A column of liquid is injected into the middle ear through the Eustachian tube, and consequently cerebral symptoms are sometimes seen. Most of the water passes into the pharynx, and not into the Eustachian tube!" There is, therefore, the dilemma of injecting the tympanum and running the risk of provoking deafness at

least, or not opening the Eustachian tube and making the patient swallow a disagreeable solution. Both these accidents are, however, rare, and always easily avoided: the first, by an equal and continuous pressure of air, which is obtained by Richardson's bellows; the second, which is usually caused by a plug of mucus in the Eustachian tube, by the energetic inflation and, if necessary, by the passage of a dilating bougie. Lastly, I have some doubts as to the efficacy of the means recommended. It appears difficult to believe that the douche, in its course from the mouth of the catheter to the tympanum, can enter this with the same force as when propelled, and that it will be a spray, as imagined by the author. Bronner having rejected continuous irrigation through the Eustachian tube, extended this ostracism to injections driven from outside.

"Surgeons have taught us that it is not a surgical proceeding, for we drive the pus into the surrounding, and until then unaffected, tissues, and in many cases of suppurative otitis, cause cerebral and mastoid complications." From this we should be right in concluding (1) that these surgeons, when they treat a purulent cavity, commence in all cases by establishing a counter opening, to save the neighbouring tissues which the pus, driven by injection through the first opening, would contaminate, and (2) that they made a second opening *sine qua non* of rational treatment. Such a conclusion would be extravagant, and I prefer to believe that surgeons are not so absolute in their statements. However this may be, Bronner proposed to irrigate the tympanum in suppurative otitis by injections exclusively through the Eustachian tube, which is precisely the counter-opening permitting the avoidance of any complication. If aurists continue to inject the tympanum from outside, is this not because they consider cerebral and mastoid complications to be only exceptionally the result of an injection, and that they consider these complications, independently of the method of injection, would be produced quite as well by injecting the tympanum through the Eustachian tube. For my part I incline to this view, and do not find in Bronner's argument sufficient reason for adopting the nasal passages exclusively.

Conclusions.—If I have dwelt upon Bronner's communication, it is because I desire to establish clearly that our respective apparatus differs as much as our manner of making the application. I do not ask you to replace the douche by the spray, and I do not propose to abandon injections from outside, so long as access to the tympanum is easy through the external channel. But it is not always so, and in many cases irrigation through the Eustachian tube is necessary. It is in these cases that the insufflato-injector will be found useful and superior to the ordinary method.

In the first place it has the advantage of rendering the insufflated air aseptic. In place of a series of instruments, there is only one convenient apparatus allowing of the rapid transition from injection to insufflation and *vice versâ*, as often as necessary; avoiding loss of time and manœuvre painful to the patient, however great may be the dexterity of the operator. The use of this apparatus is not limited to irrigation of the tympanum. It permits the use of a compact jet of fluid or a spray to irrigate all cavities. A Hartmann's canula, a sinus canula, or a nasal olive may be fixed on the carrier.

If it is desired only to give an insufflation of medicated vapour into the tympanum, or the respiratory channels, it may be utilized for the purpose of substituting for the reservoir containing the antiseptic solution another charged with the volatile medicament desired. The carrier will take the instrument suited to the cavity.

Another use of the instrument is that it may be transformed into a thermocautery. This will be the subject of another communication.

A Case of Retro-tympanic Sanguineous Pseudo-Cyst of the Left Ear. By Dr. MÉNIÈRE.

In March, 1891, a lady sought advice on account of violent humming noises in the left ear, of about six months' duration. She was thirty-six years of age, and obviously of scrofulous constitution. She had had in 1888 an acute median otitis, which became chronic. In October, 1890, the discharge stopped, and she was assured that the membrane had healed, but a month later she observed in her left ear a noise which gradually increased, and pulsated synchronously with the heart-beat. Catheterization and general treatment were tried for some time in vain, and she then came to Paris. Dr. Ménière found nothing abnormal in the drum except that at the postero-inferior segment the membrane appeared thicker than elsewhere. The Eustachian tube was free, and auscultation revealed nothing abnormal. Loud conversation was audible at from four to five mètres. On re-examination Dr. Ménière applied a probe to the thickened point, and found it hard, but apparently less sensitive than the rest of the membrane. He introduced six drops of a mixture of glycerine and coal-tar (30 to 5), and closed the meatus. Next day the point appeared of a greyer tint and more prominent. On examination with a delicate hook the part seemed slightly movable above. He then succeeded in detaching a small, hard, flattened mass, which was adherent below. Two or three drops of very dark blood escaped, and the patient cried out that her "noise had disappeared." The mass was removed and found to be three millimètres in height, two in breadth, and one in thickness. There was no perforation, but the tympanic wound felt granular to the probe and bled slightly. The little granulations were touched every few days with saturated solution of chloride of zinc, and then with carbolized glycerine. After eighteen days of this treatment it was found that there was a passage of air through the membrane on inflation. In July the oozing from the drum was scarcely perceptible, but the perforation continued and the hearing improved.

Dr. Ménière thinks probably the perforation had been simply blocked up by the medicated powders which had been insufflated. An effusion of blood had taken place, and had formed a clot which had organized and, so to speak, encysted itself. Epidermic proliferation had led to the formation of the covering which was detached. On this account Dr. Ménière used the designation "sanguineous pseudo-cyst." To this he ascribes the pulsatory noises, because they disappeared at once on the removal of the crust.

Dr. LOEWENBERG asked why the condition should be called "pseudo-cyst," and Dr. Ménière replied that he did not know any better name for it.

Dr. GELLÉ explained it as follows: first, a perforation, then a group of granulations, one of which became the seat of an encysted hæmorrhage.

On the Anatomy of the Middle Ear. Sections in Series. Demonstration of Specimens. By Dr. H. CHATELLIER.

The petrous bone of an adult was removed by the saw, placed in Muller's fluid, decalcified in pure formic acid, hardened in successive strengths of alcohol, embedded in collodion, cut with a microtome, stained with hæmatoxylin and eosin, and mounted in Canada balsam. The sections were so made that the razor passed in (? parallel to) the long axis of the malleus. They are numbered from before backwards.

He wished to draw the attention of the Society to the mode in which the *recessus epitympanicus* ("attic" of the American authors) was partitioned off from the tympanum proper.

In front the petrous bone forms a horizontal ridge, directed from without

inwards, the prolongation of the tympanic margin on the anterior wall of the middle ear reaching inwards to the cochleariform process. Above this is a recess—the anterior part of the epitympanic space—below it a gutter-shaped depression, which forms the posterior wall of the meatus and tympanum. It is to be remarked that the attic extends further forwards than the rest of the tympanum.

In sections further back the ridge is seen extending inwards for about 3·3 millimètres. As the transverse diameter of the tympanum is there 5·5 millimètres, only two millimètres are left for the opening where the attic communicates with the tympanum in front of the malleus. A little further back we come to the malleus, the lower part of the head corresponding to the tympanic margin. Between the two there is only a millimètre. Here is seen the external ligament of the malleus, a flat, fibrous membrane of some width, stretched between the tympanic margin and the hammer; its antero-posterior dimension is at least three millimètres at the marginal insertion, and it diminishes at its malleal attachment to the lowest part of the external surface of the head. It is at the same level as the osseous ridge already described, and is continuous with it.

There is thus a fibrous and osseous plane separating the attic from the tympanum in front. Internal to the malleus is the tendon of the tensor tympani, which after its reflection on the processus cochleariformis is directed outwards and forwards towards the malleus, to be inserted in some cases into the neck of the bone, in others into the handle below the short process. *The tendon is distinctly conoid in shape, the slender summit corresponding to the malleus—the base, much thicker, to the spoon-shaped process. It is separated by an interval of about one millimètre from the above described osseous shelf.

The orifice of communication between the tympanum and the attic lies, therefore, in front of the tensor tendon, and is bounded *in front* by the horizontal osseous shelf; *behind* by the external ligament and head of the malleus, and by the tensor tendon; *externally* by the tympanic margin, and *internally* by the petrous bone. It measures scarcely a square millimètre in the normal adult ear, but it is often still further reduced by pathological fibrous bands.

REVIEWS.

Pritchard.—*Handbook of Diseases of the Ear*, for the use of Students and Practitioners. By Urban Pritchard, M.D., F.R.C.S. Lewis, London, 1891.

IT is a matter of immense and almost infinite difficulty to compress into a small book the essentials of even a very moderately extended science without sacrificing intelligibility to conciseness. This is certainly true of otology, and in such a work as the one before us we feel sure the student must often experience a desire for fuller explanations of the methods and processes described. The practitioner, who is already fairly familiar with the subject, will, however, find in the perusal of the little volume the means of reviewing rapidly and suggestively the whole of the science, for no subject is omitted although some are rather briefly, and therefore somewhat dogmatically, outlined. A good sketch is given of the elementary anatomy and physiology of the organs of hearing. We would, however, have liked a more practical account of the Eustachian tube, so that the learner might better visualize the position of the orifice, and the

direction of the canal. In this respect many larger works are equally at fault, whereas in, for instance, Treves's little volume on applied anatomy these points are indicated with a clearness and precision that "special" works might well emulate. The internal ear is a pet subject of the author's, and, as one might expect, is thoroughly well treated.

The methods of examination are shortly described. In the enumeration of the uses of Siegle's pneumatic speculum no mention is made of its great value in the diagnosis of relaxation of the membrane. This condition, against the production of which the beginner should be most stringently warned, can only be satisfactorily recognised by means of this instrument, and should be described in even the shortest and most elementary manual. "Valsalva's method," as set forth herein, is a good mode of inflating the ear, if the puffing-out of the cheeks is practised, but it is not the classical Valsalva's method. Eustachian catheterization requires to be much more fully detailed, and probably the desire to limit space alone has prevented the writer from describing the various methods which everyone who attempts the procedure should have at his finger-ends.

The injuries and diseases of the external ear receive due attention. Many practical points might well have been underlined, as, for instance, the value of anæsthetics in the extraction of foreign bodies or polypi, and the violence of the pain produced by the introduction of a speculum in cases of furuncle of the meatus. The author, by-the-bye, advocates early incision, and we think him right, although authorities differ on this point. His experience seems to have given him great confidence in the efficacy of counter-irritation behind the ear in almost all inflammatory affections. A disproportionate amount of detail is given concerning the removal of exostoses, seeing that the methods of removing the ceruminous and other accumulations accompanying them, and which alone, in most cases, call for attention, are hardly referred to. Very good practical rules for the prognosis in cases of chronic non-suppurative catarrh of the middle ear are given on pages 112 and 113. Very properly great stress is laid upon the examination and treatment of the nose and nasopharynx. It seems rather strange to find the tonsil guillotine, so long known as "Mackenzie's" here figuring as the "spade guillotine." The writer very wisely stipulates for disinfection of the finger-nail by means of absolute alcohol before scraping post-nasal adenoids. In the discussion of chronic suppurative inflammation of the tympanum a paragraph on page 137 is devoted to perforation in the membrana flaccida. It might well have been longer. The intra-tympanic syringe figured on page 145 is one of the best. A half per cent. solution of nitric acid, with a little carbolic acid, is recommended for instillation in cases of caries, for the solution of bony particles. Filling of some part of the tympanum, especially the attic, with caseous material, is referred to on page 164, but we observe no further mention of the now well-recognised and redoubtable cholesteatomata. The account of superficial mastoiditis, page 167, is extremely good. Cold applications are strongly discredited. The cerebral complications are briefly described, but, most properly, the reader is recommended to refer to works on medicine and surgery. To

show the extensive scope of the work, we find attention drawn to the occurrence of intra-aural hæmorrhagic effusions in such diseases as leucæmia, pernicious anæmia, etc. Very common-sense views with regard to deaf-mutism are expressed, and their consideration will save the practitioner from much perplexity. The distinction between Ménière's symptoms and Ménière's disease is strongly insisted on.

This work cannot but call for great commendation, the second edition being in many respects far in advance of the first, as, for instance, in the description of the auditory cortical centre, and the treatment of nasopharyngeal disease. The author could with great advantage have written a larger book, and the information so concisely conveyed in the present volume would stand considerable expansion without dilution. We feel sure that Dr. Pritchard is quite capable of doing it well. *Dundas Grant.*

Davis.—*Consumption: How to Prevent it, and how to Live with it.* By N. S. Davis, jun., A.M., M.D. F. A. Davis, 1891.

THE title of this little work is not attractive, and though we must condemn attempts to write books for the instruction of the general public on matters medical, which can only lead to disaster when the said public takes to self-treatment and playing with therapeutics, we must admit that there is no harm in honest endeavours to inculcate hygienic principles, to warn of the approach of insidious diseases, and to teach the laity how to take care of the organs they possess, and to avoid the evil consequences of neglect of common-sense precautions. With such limitations we can raise no objections to popular medical writing, only drawing the line at any encouragement to self-treatment.

The title of this book would lead one to suppose that it was one of the objectionable kind of work referred to, but a careful perusal of its contents has led us to the conclusion that it is a safe book to put into the hands of every consumptive individual, inculcating plain rules as to diet, clothing, exercise, and climate, which cannot fail to be of the greatest possible advantage to the invalid. There is much in the book which may be perused with advantage by professional men, especially in the sections dealing with climate. On the whole we feel no hesitation in highly recommending the book, and congratulate its author upon having handled a very difficult subject in a very proper and professional manner.

R. Norris Wolfenden.

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MESSAGE IN DISEASES OF THE NOSE AND
THROAT.

DR. A. KELLGREN has, in his very interesting little book, "The Technic of Manual Treatment" (J. J. Pentland, Edinburgh and London, 1890), described some applications of massage to the throat, which consist of "shaking," "vibration," and "nerve vibration."

In the former, the distal phalanges of one or more fingers softly applied to the skin execute a quick movement communicated from slight flexions and extensions of the elbow joint, and the movement is continued for a few minutes at each occasion. Kellgren maintains that "it promotes "and quickens absorption; it stimulates and strengthens; it diminishes "pain by its power to reduce congestion and inflammation; and it "increases the secretion of the glands."

The tongue, submaxillary and sublingual glands, and the whole of the pharynx, can be acted upon in this manner, and the effect of the manipulations "is very rapidly beneficial in nearly all affections of the throat." Similarly the larynx and upper part of the trachea may be acted upon. A method of producing "vibration," which is only a fine shaking movement performed with the palmar surface of the hand or fingers, is more applicable to the larynx, and to the throat generally is employed for the relief of pain. In "nerve vibrations" it is the nerve itself which is subjected to the "vibrations," and may be applied to the cervical nerves for the relief of insomnia, hemicrania, and migraine; to the supra-trochlear and nasal nerves for the relief of coryza; to the facial nerve for paralysis of the same, to the lingual, superior or inferior

laryngeal nerves. Amongst the cases mentioned illustrative of the benefits of this treatment are those of patients with acute tonsillitis, in whom dysphagia appears to have been immediately relieved, swelling of the tonsils diminished, and temperature was reduced. It was also favourable in diphtheria and post-diphtheritic paralysis.

The method of applying massage directly to the affected mucous membranes has been detailed by Braun, of Trieste, and by Laker.* A sound, covered with a wad at its extremity, is introduced into the nasal cavity, and regular and rapid vibrations are transmitted through it to the mucous membrane. Under such treatment Laker claims that marked improvement, even cure (as such a term is understood by the patient), follows, not only in slight cases, but in those in whom chronic affections have lasted for many years. The application of this treatment is only to be learned by great effort, and even then must always remain in the hands of the few who are specially adapted for performing such manipulations. Continuous vibration, as understood by Kellgren, Braun, and Laker, is something totally different from massage as it is practised by the ordinary massager, whose manipulations are coarse and clumsy compared with the delicate vibrations of the operators mentioned. Thus Laker performs vibrations which vary between 600 and 2000 per minute, the ordinary duration of each vibration being 0·085 of a second. These applied to any point of the mucous membrane regularly, result in benefit, but irregularly conducted vibrations are only productive of painful sensations and harm. Laker states that a whole series of vibrations can be applied with a difference of only one hundredth of a second between each.

Chronic inflammatory conditions (catarrh) are especially amenable to this treatment. As a general rule hypertrophic forms yield more easily and are more readily cured than the atrophic forms, independently of the duration of the condition which of course influences the time when cure may be anticipated. Those conditions which lead to narrowing of the nasal passages, and which may be accompanied by "reflex neurosis," offer a very favourable field for vibration treatment. After the first sitting there is generally some swelling of the soft parts and even hypersecretion, lasting for five days to a week, but it is a favourable sign. Though immediate relief is sometimes felt after the first application, patients should be warned that this is not usually the case. Improvement is generally intermittent, and there are pauses in the course of the treatment when improvement is stationary. However this may be, such pathological reflexes as headache, migraine, lachrymation, depression, loss of memory, cough, neuralgia, asthma, which may have existed unrelieved for many years, not seldom are ameliorated after the first sitting and yield in an almost magical manner to subsequent treatment. Though the cautery relieves a number of cases by removing swellings, growths, hypertrophies, &c., it fails to cure some of these cases, especially those in which there is little in the way of overgrowth of tissues, and in these cases, which are amongst the most disappointing that the rhinologist has

* "Die Heil-Erfolge der inneren Schleimhaut-Massage beiden Chronischen Erkrankungen der Nase, des Rachiens, des Ohres und des Kehlkopfes," von Dr. Carl Laker. Graz: Leuschner and Lubensky. 1892.

to deal with, it would seem as if "vibration" treatment might well replace the commonly applied treatment. Indeed, there seems much ground for Laker's remark that the indications for galvano-caustic treatment require to be largely circumscribed in view of what vibration massage is capable of accomplishing. It is not to be thought, however, that galvano-caustic measures can be entirely supplanted by massage, and Laker even uses the cautery snare as an adjunct treatment, especially for the removal of hypertrophies which remain after massage treatment. After removal of multiple polypi, massage appears to be especially beneficial in restoring the degenerated mucous membrane from which they have sprung, which otherwise would doubtless be cauterized and transformed into cicatricial and physiologically useless tissue. Atrophic and dry catarrhs show great improvement and even cure from vibration massage. Their treatment, of course, demands a much longer time than the hypertrophic catarrhs, but the massage treatment of atrophic catarrhs would seem to hold out more favourable hopes than any other form of therapeutics, and this indeed is only what we should expect when we consider that such treatment must of necessity tend to restore the physiological integrity of a mucous membrane which has undergone trophic changes.

Laker speaks of obtaining great success, often sudden, in cases where crusting and the accompanying disagreeable smell forms a prominent feature, and in which cases routine treatment had previously been pursued unsuccessfully. This must, of course, be largely, if not wholly, due to the improved nature of the secretion apparatus, glands and nerves, of the mucous membrane, and consequent return to proper physiological condition of the secretions themselves. One of the first consequences of massage treatment in the less severe forms of atrophic rhinitis is a feeling of inclination to sneeze, and moistening of the parts—sensations perhaps to which the patient has been long a stranger. Crusts are softened, decrease in number and size, and are detached easily and without bleeding, and no longer becoming hard, are replaced by thick, white, mucoid secretions, easily got rid of by blowing the nose, before they can desiccate. The sense of smell returns, so that the patients, previously unable to perceive the odour of iodoform, now distinguish the perfume of flowers. Even purulent rhinitis can be readily cured by vibration massage.

The sound which is used is first disinfected by passing through a flame, and then plunging into a one per cent. solution of creolin. It is covered with a wad moistened with vaseline, or menthol vaseline, which Braun uses of from two to eight per cent. Laker prefers a ten per cent. solution of cocaine, and, as the first few applications appear to be somewhat disagreeable, this is perhaps desirable. For atrophic forms of catarrh he prefers the glycerine solution of iodine and potassium iodide (one per cent. of iodine). Pain at the back or vertex of the head, the ear, or incisor teeth, is sometimes complained of at first, but readily gives place to a pleasurable sensation during the application. Slight hæmorrhage not unfrequently occurs, but is not of great consequence. In a few very neurotic individuals there is at first sometimes an increase of nervous

symptoms, which may necessitate the sittings being made at somewhat longer intervals. Each sitting lasts in most cases from a few seconds to several minutes, according to the case, and the whole treatment extends over a period of from three to six weeks. The longer its duration the less chance there is of recurrence.

For application of "vibration" to the retro-nasal space a special sound is required, which is fixed in a handle, so that the whole hand and not merely the fingers manipulate it. In the pharynx proper Laker uses "tapotement" as well as vibration. Laker states that the several chronic catarrhal changes of the retro-nasal space are often improved in an amazingly short time by "vibrations." When the whole of the upper air passages has to be treated, he does so in the following order: 1, nose; 2, larynx; 3, retro-nasal space; 4, pharynx. We read with some astonishment that the obstruction caused by adenoid growths will disappear in young patients, doing away with the necessity of operative interference. This statement is founded upon the fact that of six cases of post-nasal growths not operated upon by Dr. Laker, a complete cure was obtained by "vibration-massage." Pharyngitis granulosa amends under the treatment, which is prefaced by cauterizing the granules. While we may be tempted to remark that by preliminary treatment of this character we eradicate the disease, which effect can scarcely be attributed to massage, it is the secondary troubles to which the granules give rise that "vibration" benefits. In that obstinate form of disorder, "pharyngitis sicca," the treatment is highly beneficial.

The tonsillar catarrhs so frequent in children are relieved by massage.

The numerous forms of catarrh of the larynx, which lead to loss of function of the mucous membrane and underlying tissues, seem to be directly amenable to vibration massage, and it can be readily understood that paresis of laryngeal muscles cannot fail to benefit in the manner that other muscles of the body do from massage. Infiltrations can be made to disappear, and ulcers can be healed, whether catarrhal or specific (tubercular or syphilitic), which is explained by Laker with some plausibility to be due to the restoration of circulatory phenomena round the base of the ulcer, the reason why they do not oftener spontaneously heal being due in such cases to chronic tissue changes in the tissues subjacent to the ulcer. Much weight is lent to this observation of Laker by the daily experience of laryngologists as to the spontaneous cure of many small laryngeal ulcers, provided they are only kept clean.

The performance of endo-laryngeal massage is naturally more difficult than similar applications to the nose or pharynx, and entails a knowledge of laryngoscopy. A sound, similar to those previously described, and armed with a wad soaked in ten per cent. cocaine solution is employed, the instrument being grasped in the hand, and not merely in the fingers, as in intra-nasal massage. The sound being enclosed by the vocal cords, each in turn is pressed upon, then the anterior commissure, and finally the inter-arytenoid space. Laker maintains that we have in this method a new diagnostic means of estimating the degree of muscular strength of the vocal cords. For massage of the parts below the glottis, the sound is pressed further

down and against the corresponding surface. A bayonet-pointed curvature may be given to the sound.

The sinus pyriformis, vallecule, and other parts may be similarly treated. Such applications are given every second or third day. The only reaction caused appears to be dysphagia, on which account they should not be made just before the principal meal time. Hæmorrhage can only occur from too forcible pressure of the sound. The cases which Laker details at the close of his work are somewhat remarkable. Thus by what other means could cure be obtained of atrophic rhinitis, pharyngitis, and laryngitis in five weeks? And, though recurrence occurred, this was cured in three weeks, and the patient had been for three months completely free from her troubles. Simple medical treatment by any local measures employed up to now could scarcely attain this result.

Of the applications of massage to disorders of the ears we have not spoken here, but its use in otology appears to be quite as important and effective as in the disorders we have dealt with.

VOICE TRAINING.

A VERY interesting series of (three) papers written by our colleague, Dr. Joal, upon the mechanism of respiration in singers, which has just appeared in the "*Revue de Laryngologie*," gives us the opportunity to devote some remarks to this subject. Moreover, at the last meeting of the British Laryngological Association a discussion upon the same subject was started, which led to no other practical result than the adoption of a somewhat bald resolution to the effect that vocal training in public speakers was a neglected branch of education. If the Society had carried its discussion so far as to formulate some plan by which this important fact could be brought home to those entrusted with the care of young persons, and some scheme for remedying this undoubted defect, its deliberations would have had more value than could be accorded to them by the adoption of a self-evident proposition. There were several aspects of this discussion to which adverse criticism might be directed. It was scarcely a very dignified proceeding for a presumably serious Society to so openly identify itself with the methods of one particular voice trainer, and he a layman. An interesting essay might be written upon the ethical question of the alliance of the specialist with the non-professional man in voice training as in other matters concerning the treatment of patients. It is not a very edifying spectacle to see a scientific Society giving an open testimonial to a teacher of elocution, be his methods of voice training right or wrong, and the only creditable explanation of the occurrence in this instance is that the Society was unprepared for the turn the discussion took.

What is the correct method of breathing for those who use the voice? Three types of breathing are generally recognised: (1) the superior costal, or clavicular; (2) the inferior costal; (3) the abdominal, or as it is often called the diaphragmatic. In the first, or clavicular type, the

inspiratory capacity of the chest is increased by the upward and forward movement of the upper ribs, the clavicle and sternum, a method against which, since Mandl openly condemned it, most medical writers have combined. But this applies particularly to the male subject. The female is supposed to breathe normally by the superior costal type. Though accepted as a physiological fact, it is worthy of remark that in non-civilized tribes the researches of Mayo and Kellog show clearly that these females breathe naturally by the "abdominal" method, and it is only the intervention of the corset which has led to the superior costal type of respiration. This method of breathing is therefore to be regarded as an artificial one, induced by the circumstances of civilization. The more we approach the type of the natural woman, as she is found untrammelled by the dictates of fashion or even civilization, the closer does the mechanism of breathing resemble that of the ordinary male.

Certain pneumographic researches undertaken by Bergonié and Viault tend to prove that the normal man presents a pneumographic curve of greatest intensity at the level of the lower ribs, the curve taken at the umbilicus being less, and that taken at the upper ribs the least. Joal endorses the statement made by Beau and Massiat in 1842 as correct, viz. : "According as individuals advance in age, the predominance of "the superior costal type is manifested in the feminine sex, and there is "a nearly equal employment of the two other types in the male sex."

In young girls, whose figures have never been constricted by corsets, it is not difficult to assimilate their breathing to the male type ; in others, whose vocal training does not commence until later in life, or in whom corsets have become a necessity, the breathing cannot assume a perfect abdominal type. It may even be doubted whether this assimilation of the two types is a necessity, or even always wise, since many fine singers yet employ the now much-blamed clavicular type.

When Mandl revolutionized the prevailing methods of teaching at the Paris Conservatoire, he taught that the descent of the diaphragm and the pushing forward of the abdominal walls was the correct method of inflating the chest. This so-called "diaphragmatic" breathing is the method largely taught by singing-masters in this country and elsewhere at the present time, but that it is manifestly wrong is the task which Dr. Joal sets himself successfully to prove. "We cannot sufficiently," says he, "raise our voices against the doctrine of Mandl, which is "founded upon false anatomical and physiological data, upon theory, "and upon facts badly observed, or wrongly interpreted." Mandl enumerated a striking catalogue of evils which followed as a consequence of clavicular breathing, but quite as severe a condemnation may be stated against the exaggeration of abdominal breathing which Mandl originated, and whose teaching many now follow. To many teachers the use of the ribs and the chest muscles in expanding the thorax is a "negligible quantity," and the pupil is taught that to fill his chest with as much air as possible by extreme descent of the diaphragm and protrusion of the abdomen is the aim to be attained.

Certainly, so far as we know them, this is the direct opposite of all the teachings of the old Italian masters, who taught their pupils to sing with

the abdomen flattened, and not pushed out to its extreme limits, and as Gottfried Weber said, "It is impossible to explain why it is so, but undoubtedly the old Italian method is the best." Even physiologically the "abdominal method"—we prefer this term to the other—is proved not to be the correct one. If the object desired is the complete inflation of the chest, it is not arrived at by this method so successfully as by what is known as the "lower costal" method. Slight compression even of the abdomen, by belts or bandages, has been found very frequently to add to the singer's power, just as it has to those who require "wind" for athletic exercises. It is of great interest to note the results of the examination of artists of note by Dr. Joal. Of eighty-five individuals, he found that in twenty-three females nine employed the clavicular method, and fourteen the costal type; while in sixty-two men eleven employed the clavicular type, nineteen the abdominal type, and thirty-two the costal type. He did not meet with a single cantatrice who used the abdominal type, and the proportion of male singers using that method was comparatively small.

The correct way of breathing for singing is the physiological method of ordinary breathing, viz., the inferior costal type, in which the chest cavity is enlarged at its base, with a moderate and normal degree of descent of the diaphragm, and it must be conceded that physiologically the doctrine of exaggerated descent of the diaphragm and pushing out the abdominal walls is pernicious. Indeed, the less the pupil thinks about his diaphragm, the better for himself. The spirometer is often appealed to as indicating that the air-contents of the chest can best be augmented by extreme descent of the diaphragm. Even if this extreme inflation were necessary, it is not true that it can be obtained more perfectly by abdominal than by costal breathing. In support of this contention may be cited an experiment (amongst many other spirometric observations), conducted by Dr. Joal, upon three singers who possessed perfect control over their respiratory movements. The vital capacity in the three methods of breathing was found to be as follows :—

Clavicular respiration. Cubic ctns.		Abdominal respiration. Cubic ctns.		Costal respiration. Cubic ctns.
4,600	.....	5,200	.....	5,300
4,000	.....	4,300	.....	4,800
3,700	.....	4,000	.....	4,300

which shows a considerable degree in favour of costal over abdominal respiration. Considered physiologically, "diaphragmatic" breathing is therefore wrong; pathologically, it is vicious, and it only remains to show that in an æsthetic sense it has nothing to recommend it. The thorax is admittedly the chief "resonator," and "diminution in the vertical diameter of the chest, and increase in the transverse diameter, have the effect of heightening the fundamental tone of the thoracic resonator, whilst the diminution of the transverse diameter and increase of the vertical diameter lower this same tone," facts which clearly result from the experiments of Sewal and Pollard, and from pneumographic researches. Dr. Joal's own experiments lead him to the conclusion, with which no one can fail to agree, "that the volume and form of the thorax

"vary according to the height of the sound, and that the chest deserves "to be considered as the most perfect resonator"; but, in order that this function may be perfectly accomplished, it is essential "that the thorax "may have the power of dilating or contracting in its upper and middle "parts, at the level of the eighth and fourth ribs, conditions which cannot "be fulfilled when the singer employs the abdominal type with isolated "contraction of the diaphragm and complete inactivity of the thoracic "muscles."

The whole case for "costal" as against "diaphragmatic" breathing is thus admirably summed up by Dr. Joal:—(1) It dilates the chest in its three diameters, transverse, vertical, antero-posterior, and permits the filling of the thorax with a greater volume of air than the clavicular and abdominal types; (2) it favours the production of thoracic vibrations, and increases the power of the pectoral harmonics; (3) it extends to the whole of the thoracic cavity, utilizing the different muscular forces of respiration, and dividing the total work over a great number of agents, giving greater power of resistance to fatigue; (4) it permits of graduation of the exit of air and economizing of the wind, from the antagonism of the inspiratory and external expiratory muscles; (5) it is based upon the physiological laws, according to which thoracic effort is produced; (6) it is employed by the majority of singers, advised by the most celebrated artists, and recommended by the old Italian masters of singing, who carried the perfection of the art to such a high degree.

Dr. Joal's conclusions are not founded upon mere opinion, but upon direct experiments, the conduct of which has occupied him for several years, and the subjects of which have been singers of renown. The perusal of his interesting papers should be the duty of everyone who aspires to teach the correct method of breathing. It is to be hoped that they will do something to correct the pernicious teaching, so fashionable nowadays, of "diaphragmatic breathing," which some eminent teachers of singing, with little knowledge of anatomy or physiology, still press upon their pupils, in blind advocacy of Mandl's doctrines. And why, may we ask, are these matters left in the hands of lay teachers?

We have referred previously to the discussion on "Voice Training" at the British Laryngological Association. A portion of this debate turned upon the treatment of stammering, and in this we are in entire agreement with those speakers who maintained that the treatment by the teacher of elocution should be prefaced by thorough examination of the upper respiratory passages by the surgeon, and appropriate surgical intervention where requisite. But we would guard against the too close alliance of the surgeon and the elocutionary teacher, just as we would guard against unnecessary surgical intervention. We are quite certain that this is often undertaken. It is a thousand pities that the training of the voice and of speech is not taken out of the hands of laymen by professional men, and undertaken by their own craft. This would mean the creation of a new class of specialists, for the ordinary physician or surgeon could not give the requisite time or attention to such a special branch of medical training; but it is not right that it should be undertaken by non-professional men, when its very basis should be the

possession of a competent knowledge of anatomy and physiology. It is pitiable also to see how little is really known of the culture of the voice and the correction of its defects by the intelligent practitioner, and even the throat specialist, unless his musical tastes have led him to give more than ordinary attention to the subject. This is not as it should be, and the consequence is that such training is left to non-professional men, whose theories and practice are often the reverse of correct. It can only be hoped that more attention will be given to these matters in the future by specialists themselves, and it would be equally beneficial to the public at large if vocal training were made a necessary part of the education of every boy and girl, and that professional men should study these very important questions for themselves, so that they may become competent to advise correct training for young subjects, instead of, as at present, leaving it to be dealt with by persons outside the profession, whose efforts may be commendable enough, but whose methods are often questionable.

NEW INSTRUMENTS, THERAPEUTICS, &c.

Hewitt, Frederic (London).—*A Modification in Junker's Chloroform Inhaler.* "Lancet," April 30, 1892.

THE efferent tube containing the chloroform-laden air is conducted *inside* the afferent tube, which is of necessity much thicker than in the original. There is, therefore, no chance of attaching the conducting tubes to the wrong pipes, as is possible in the latter. The large tube is passed round the administrator's neck, and kept securely by means of a chain. The chloroform bottle is thus suspended, as from a collar, and there is, therefore, little or no danger of it being upset. Mr. Hewitt recommends his modification on the strength of nine months' use. *Dundas Grant.*

White, J. Blake (New York).—*A Double Nasal Spray and Vapourizer.* "Med. Rec.," March 26, 1892.

THERE are two tips, one fitting into each nostril. The author thinks that a spray thus introduced while the patient inspires strongly can enter the pulmonary tubes much further than any mouth spray can do.

Dundas Grant.

Knight, Charles H. (New York).—*An Electric Tonsil Snare.* "Med. Rec.," May 14, 1892.

A FIRM metal ring of oval shape with a metal shaft has attached to it such a pair of hollow tubes as are usual in galvano-caustic snares. The platinum wire of the snare is formed into a loop corresponding to the ring, and is attached to it by a single fine thread. It will be easily seen that, the loop being placed round the tonsil, the thread is burnt through when

the wire is hot and that the snare can then burn its way into and through the part. The apparatus may be used with any handle, such as that of Schech.

Dundas Grant.

Spencer (St. Louis).—*A New Nasal Speculum*. "The Medical News," Feb. 6, 1892.

THIS consists of two blades, "slightly flared" at their extremities, so as to be self-retaining, and worked by a screw with a guide rod fixed parallel to it.

B. J. Baron.

Oatman E. (Nyack, N.Y.).—*New Method of Fastening the Wire in Nasal Snare*s. "Med. Rec.," April 16, 1892.

THE wire is passed under an eccentric milled wheel, with a lever attached. Compressing this lever causes the wire to be tightly gripped.

Dundas Grant.

Bucklin, Charles A. (New York).—*A Universal Nasal Saw*. "Arch. of Otol.," Jan., 1892.

THE saw is like Bosworth's, but there are three blades adaptable to the one handle. One blade has the same conical teeth, another has teeth "raking" forwards, and the third raking backwards. They can be turned upwards or downwards.

Dundas Grant.

Cholewa (Berlin).—*Instruments for Application of Trichloroacetic Acid in Nose and Ear*. "Monats. für Ohrenheilk.," 1892, No. 2.

DESCRIPTION of some probes which can be used for that purpose.

Michael.

Jarvis, William C. (New York).—*A Modified Nasal Ecraseur*. "Med. Rec.," March 5, 1892.

A PISTOL-SHAPED handle is adapted to a slight modification of Jarvis's original snare, so as to clear the line of sight. The working is effected by means of a ratchet. The inventor prefers the old screw mechanism, with its slow strangulation, for angiomata, posterior turbinated hypertrophies, or other vascular growths, but the new modification is well adapted for gelatinous polypi.

Dundas Grant.

Lubet-Barbon (Paris).—*Bromide of Ethyl as a General Anæsthetic*. "Arch. Internat. de Laryngol., de Rhinol. et d'Otol.," Jan. and Feb., 1892.

FOR many of the operations practised in our specialty, the comparatively short anæsthesia afforded by this vapour gives sufficient time in the hands of a competent operator. If given freely without admixture with air, five or six inspirations suffice to produce anæsthesia. Dr. Lubet-Barbon recommends it for removal of tonsils, adenoids, nasal spurs, hypertrophies of the turbinated bodies, aural polypi or malleus.

Dundas Grant.

Schroeder, H. (New York).—*The Treatment of a Cold*. "Med. Rec.," Jan. 30, 1892.

A GOOD *résumé* of the commonplaces, and recounting so many methods of treatment as to leave the subject very much where it was. The writer

finds belladonna and aconite useless, and prefers for sedative purposes in children two or three grains of phenacetin and about five grains of sodium bromide. At the stage of acute rhinitis he advises a snuff powder of boracic acid, bismuth, morphia and camphor. To each drachm of this may be added one-eighth grain of atropin, which stops the discharge, but leaves an unpleasant feeling of fulness. Cocaine is most strongly condemned. Liquid vaseline is recommended as a good vehicle for drugs administered by means of sprays.

Dundas Grant.

Kaufmann, P. (Cairo).—*Identification of Tubercle Bacilli in Sputum by a New and Simplified Process.* "Lancet," May 21, 1892.

A COVER glass preparation is made and stained with carbol-fuchsin in the usual manner. It is then moved to and fro in water at a temperature between 208° and 212° Fahr. from one and a half to three minutes. It may then be examined with or without double staining having been practised.

Dundas Grant.

Egidi, F. (Rome).—*Modified Apparatus for Laryngeal Intubation in Children and Adults.* "Boll. delle Mal. dell' Orecchio, della Gola e del Naso," Jan., 1892.

THE author deals first with the importance of intubation, which, if it is not destined definitely to replace tracheotomy, will cause it at least to take a second place. He has been one of the first in Italy to apply laryngeal intubation, and is endeavouring to extend its use and to simplify the apparatus which up to now has been in use. He describes the apparatuses for intubation, from the oldest, that of Bouchut, to the most modern. Egidi has endeavoured, in his own modification, to avoid the great defects in O'Dwyer's apparatus. These consist, according to him, *first*, in the exaggerated length of the tubes, which renders their introduction into the larynx not an easy matter, because in raising the instrument the curved part of the introducer is apt to strike against the roof of the palate, the result being a displacement and deviation of the inferior extremity of the laryngeal tube. *Secondly*, in their narrow calibre, rendering the passage of membrane difficult, and causing frequent occlusion by the mucus, which is so liable to adhere to, and become inspissated on, their internal surface. *Thirdly*, in not having the conductor hollow, so that one is never sure of having entered the larynx until the introducer has been removed from the tube, which it closes hermetically.

Avoiding these inconveniences, Egidi has had made oval tubes, shorter and wider than those of O'Dwyer, with the conductor hollow, and having a joint in the middle so as to facilitate its extraction. He finishes his remarks by speaking of laryngeal intubation in acute and chronic stenosis of adults.

V. Grazzi.

O'Dwyer, J.—*An Improved Method of Performing Artificial Respiration.* "Archives of Pediatrics," Jan., 1892.

THE Sylvester and other methods of imitating the natural expansion of the chest are inefficient, because the chest cannot be expanded to any considerable degree without contraction of the inspiratory muscles, and

especially of the diaphragm. Fell's method of forcing air into the lungs by a foot bellows, as is done in laboratories upon the lower animals, is open to serious objections. Tracheotomy has to be performed, and the wound round the canula made air-tight, and the trachea tamponed or tied above the incision; the tongue, unless secured, causes obstruction, and the vocal cords may be forced together by the intruding air. Should the larynx be obstructed, the stomach would be inflated, and not the lungs.

O'Dwyer has devised a set of tubes to establish direct communication between the bellows and lungs by the natural passages. The laryngeal part of the tube also tampons the larynx below the vocal cords, so that no air can return beside it.

The set consists of two long tubes—one for children and one for adults—and five laryngeal tips, the lower portion of which are grooved to allow the vocal cords to help in holding them down. The proximal portion of the long tube has two openings, one for inspiration connected with the bellows, the other to be controlled by the thumb of the right hand.

The principal danger to the lungs is over-distension and rupture of vesicles, from forcing air into the lungs and not allowing it time to escape. This is prevented by making the respirations slowly—ten to twelve to the minute—and watching the movement of the chest.

The great value of the method has been demonstrated by Dr. Fell in opium poisoning, and by Dr. H. C. Wood in resuscitating animals apparently dead from ether and chloroform, even when respiratory movements had ceased for two minutes, and in which the heart had ceased to beat. Its value in cases of apparent death from anæsthetics in the human subject is obvious. It is also of value in paralysis of the inspiratory muscles, as in strychnine poisoning, puerperal and other forms of eclampsia, and acute pulmonary obstruction from various causes.

A patient can be breathed for while still perfectly conscious, and it can be kept up for several hours after he has lost the power to breathe for himself.

These tubes may also be used to prevent blood from entering the lower air passages during operations in or about the mouth, affording also free passage for air to and from the lungs, a lateral curve of the proximal part of the tube being all that is necessary.

R. Norris Wolfenden.

Fell, G. E.—*Forced Respiration.* "Archives of Pediatrics," May, 1892.

AN answer to the objections of O'Dwyer to his method. His apparatus is not identical with that used in laboratories. It consists of a large bellows, a rubber tube, connecting with a large brass tracheotomy tube with a valve, which when turned opposite ways would admit of the passage of air into and out of the lungs. The tube and the valve are now made in separate parts connected by flexible tubing, to avoid giving the trachea a wrench on turning the valve. The tube is not ligatured to the trachea as in the laboratory apparatus, but rings of larger or smaller size are screwed on to the end of the tracheotomy tube, so as to tampon the trachea. The connections are made so as to be easily disconnected. The air can pass through the valve in or out, at all times, except during forcible inspiration;

the air from the bellows is constantly passing through the tube during expiration, and is thus enabled to immediately enter the lungs when the piston is pressed down, and by removing the thumb from the piston expiration immediately follows without counter air-current from the bellows. Auto-respirations can thus be assisted. A constant stream of air is provided for by double bellows, and the air is heated by an "air-heater." The apparatus thus differs very considerably from the laboratory apparatus.

The author, by fitting a rubber cup to the face (face-mask), saved several lives without tracheotomy before preparing his present face-mask.

He speaks of the disadvantages of intubation as proposed by O'Dwyer. It prevents the imbibing of fluids, important in narcotic poisoning, and where the respiration has to be kept going for many hours. Vomited fluids may also enter the larynx. It will not be required where the face-mask is applicable, and he controverts O'Dwyer's arguments against forcing air through the mouth and nose. He condemns the cheap apparatus described in the "Year Book of Treatment" of 1891. With the face-mask respiration can be kept up for ten hours; after this has failed, life has been saved by him by performing tracheotomy. The face-mask obviates the practice of intubation. The author's experience of "forced respiration" is greater than that of any other surgeon, and has been extremely favourable.

R. Norris Wolfenden.

DIPHTHERIA, &c.

Schlichter (Wien).—*Contribution to the Etiology of Diphtheria in Infants.*

"Archiv für Kinderheilkunde," Band 14, Heft 3, 4.

The author refers to twenty-seven cases of diphtheritic infections in infants observed by him. Nearly all cases were sporadic, and could not be related to a special infection. He concludes that diphtheria of infants has no relation to puerperal diseases of the mother, that it must be caused by diphtheritic infection also if this cannot be proved for an individual case, and that the individual predisposition of infants is increased by diminished resistance caused by atrophy or lung diseases.

Michael.

Baginsky, A. (Berlin).—*Etiology of Diphtheria.* "Berliner Klin. Woch.," 1892, No. 9.

COMPARE the report on the meeting of the Berliner Medicinische Gesellschaft, Jan. 30, 1892.

Michael.

Williams (Richmond).—*Diphtheria.* "The American Practitioner and News," March 12, 1892.

THE author believes the disease to be local at first, the system being infected later on. Early diagnosis and treatment being imperative, he advises us to remove a piece of the membrane, stain it in fuchsin or

gentian violet, and examine for the bacillus. He has had the same good results as Seibert had with hypodermic injections of aq. chlori. through the membrane. Mere gargling or spraying with antiseptic solutions fails to reach the bacilli. Tonic treatment and scrupulous cleanliness are insisted on.

B. J. Baron.

Fischer, Louis (New York).—*An Early Method of Diagnosis in Diphtheria.* "Med. Rec.," Dec. 5, 1891.

THIS is by means of a stroke-culture from a scrap of the membrane removed with sterilized instruments from the patient's throat. In from twelve to eighteen hours colonies of the bacilli can be obtained. The biological test on white mice is also recommended.

Dundas Grant.

Bokai.—*Report on the Present Standard of the Treatment of Diphtheria.* Königlische Gesellschaft der Aerzte in Budapesth. Meeting, Feb. 13, 1892.

REVIEW.

Michael.

Heysinger (Philadelphia).—*Potassium Permanganate in Diphtheria.* "Journal of Ophthalmology, Otology and Laryngology," Jan., 1892.

THE author treats diphtheria by administering every hour, or in bad cases every half-hour, one teaspoonful of a solution of one grain of permanganate in three ounces of water alternately with a mixture of five drops of tincture of belladonna in the same amount of water. This is steadily carried out for twenty-four to thirty-six hours, and the results claimed are extremely good.

B. J. Baron.

Dabney (University of Virginia).—*The Appearance of Nervous Symptoms in the Early Stages of Diphtheria.* "Med. News," Jan. 16, 1892.

NUMBNESS and tingling in the limbs, especially in the arms, but accompanied with no loss of tactile sense, nor of sense of pain, and with no motor disturbance, was noted in a child on the second day of the attack. These phenomena lasted three or four days. In another member of the same family, also suffering from the same disease, these symptoms made their appearance on the first day, and lasted three days.

Both patients got quite well.

B. J. Baron.

Turner.—*Successful Treatment of Membranous Croup without either Tracheotomy or Intubation.* "The Times and Register," Mar. 19, 1892.

THIS is the title of a paper read at the Philadelphia County Medical Society's meeting, held Feb. 10, 1892.

The treatment consisted in the administration of chloride of ammonium and syrup of tolu by the mouth, and of suppositories containing assafoetida, quinine and codeia. Four cases were thus treated, and all recovered.

Dr. Rosenthal expressed surprise [*as we also desire to do*] at such a formidable disease being so easily combated. He found that his statistics showed that three recovered out of 420 cases where neither tracheotomy nor intubation was practised, and where the diagnosis was *undoubted*!

Dr. Wharton found that 43 per cent. of croup tracheotomies recovered at the Children's Hospital last year. Inhalations and tonic treatment were also advocated.

Dr. Trantman gives bichloride of mercury, tincture of iron, and chlorate of potash. If an emetic does not bring away the membrane at once he tracheotomizes.

Dr. Nutt has had four deaths out of seventeen intubations.

Dr. Roberts advocated intubation in suitable cases.

Dr. Da Costa believes in the internal administration of mercury, with quinine. He does not think that croup and diphtheria are identical.

Dr. Deaver thinks that intubation blocks the larynx in croup and depresses. He uses calomel to salivation.

Dr. Massey prescribes insufflations of powdered sulphite of soda, which dissolves the membrane in twelve to twenty-four hours.

Dr. Longaker uses solutions of peroxide of hydrogen sprayed or swabbed on.

Dr. Rosenthal believes that diphtheria and croup are clinically the same. He protests against the indiscriminate use of emetics, and relies on pure peroxide of hydrogen locally, and tonics and stimulants generally.

B. J. Baron.

Martindale.—*A New Method of Treatment of Diphtheria, based upon Three Years' Practical Treatment.* "New York Med. Journ.," Feb. 13, 1892.

THIS consists in heating the temperature of the sick room to 104° Fahr., and saturating the atmosphere with the vapour of tar and turpentine in equal proportions. Twenty-three patients had thus been treated, with only one death.

B. J. Baron.

Rehn (Frankfurt-a-M.).—*Local Treatment of Pharyngeal Diphtheria by Liq. Ferr. Sesquichlorate.* XIc. Congress für innere Medizin. Meeting, April 22, 1892.

RECOMMENDATION of this treatment, which the author has applied in many cases with good result.

Tooth, Howard (London).—*Case of Enteric Fever with Pulmonary Complications, followed by Laryngeal Diphtheria; Tracheotomy; Death; Necropsy.* "Lancet," April 2, 1892.

THE evidence of typhoid fever was unquestionable. The larynx and trachea were found to be lined with diphtheritic membrane, but free from ulceration and from necrosis of cartilage. Death seemed to be from causes unconnected with the larynx, as breathing without the canula was possible for some hours before death.

Dundas Grant.

Mallins, H. (Watton).—*Diphtheria arising from Faulty Drainage.* "Lancet," Mar. 12, 1892.

A CASE of diphtheria (followed by paralysis) in a boy who slept in a room the air of which was polluted by emanations from a cess-pit. There was no other case in the neighbourhood, and it is apparently a mystery how the specific bacillus got into the cess-pit.

Dundas Grant.

Mayer, Wilhelm (Fürth).—*Operative Treatment of Diphtheria in Fürth, 1877-92.*

OF 316 cases of tracheotomy, 103 (= 32·5 per cent.) cures. Of eight cases under a year one was cured. In twelve cases the child died on the table

because the operation was performed too late. The cause of death was in some of the cases exhaustion ; in others, inspiration of a membrane. Usually chloroform was given. The superior operation should be preferred, because the inferior is very difficult on account of the thyroid or thymus gland. The author reports some cases in which the tracheotomy was followed by disagreeable complications, and mentions some cases in which the canula only could be removed after a long time. Intubation also was tried by him, but without great success. He concludes that tracheotomy is easier for the physician.

Michael.

Frankel, E.—Aerztlicher Verein in Hamburg. Meeting, March 22, 1892.

THE author showed microscopical specimens of true diphtheria and scarlatinous diphtheria. In cases of true diphtheria Loeffler's bacillus is always found, in scarlatinous diphtheria this micro-organism is not.

Michael.

NOSE AND NASO-PHARYNX, &c.

Bresgen (Frankfurt-a-M.)—*The Question of Obstructed Nasal Respiration, especially in Children.* "Jahrb. für Kinderheilk.," Band 34.

POLEMICAL article.

Michael.

Bresgen (Frankfurt-a-M.)—*Relation between Diseases of Speech and Diseases of the Nose and Pharynx.* "Monatsschrift für die gesammte Sprachheilkunde," 1892, No. 4.

If there is any obstruction of the nose, often the forms of the bones of the nose and palate are changed, and the muscles cannot perform their functions as in normal cases ; therefore the difficulty in learning to speak is much greater in children with these diseases than in normal cases.

Michael.

Grünwald.—*Rhinological Demonstrations and Communications.* Aerztlicher Verein in München. Meeting, Feb. 10, 1892.

REPORTING review on nasal suppuration, with special regard to the experiences of the author on caries of the ethmoid bone. In such cases he extracts the carious parts by forceps and sharp spoons.

Michael.

Ziem (Danzig).—*Intra-ocular Diseases consequent upon Nasal Diseases.* "Munch. Med. Woch.," 1892, No. 16.

IN a patient who had cancer of the nose, and consequently upon it a diminution of the field of vision in his left eye, the author obtained temporary improvement by cleansing the nose.

Michael.

Schweinitz.—*A Note on Asthenopia and Intra-Nasal Disease.* "Med. News," April 2, 1892.

THE author relates cases in which there was violent head pain on exposure to sunlight, or on reading, or using the eyes, with error of refraction.

The voice was in one instance slightly nasal, and there was post-nasal catarrh. On careful examination by a rhinologist, chronic suppuration of the frontal sinus and ethmoidal cells was diagnosed, and treatment led to great improvement in the ocular abnormalities. In another case, with similar eye troubles and much pain in the head, the septum was found to be engorged, as also the inferior turbinates. The right antrum was tender, and its opening in the nose surrounded with myxomatous growth. A cautery point applied to the nostril and other suitable treatment was followed by good results. [No rhinologist doubts but that only too frequently the eye alone is treated, and unsuccessfully, when nose treatment would materially assist the oculist, who does not call in the aid of the rhinologist frequently enough.—*Rep.*] B. J. Baron.

Schalck, E. (New York).—*A Case of Anosmia.* "Med. Rec.," March 12, 1892.

A MAN fell downstairs on his occiput, and bled from the nose. He had symptoms of concussion for forty-eight hours, and then recovered, but found he had lost his sense of smell. His appetite was impaired, as everything seemed to taste alike. The sense of taste ["proper," we assume] was unaffected. His anosmia has remained, so far, unchanged. The olfactory nerves were apparently injured by the *contre-coup*. Two other cases are referred to—the cause in one being polypus; in the other, atrophic rhinitis. Improvement under treatment took place in both. Dundas Grant.

Johnson, Walter B. (New Jersey).—*An Original Device for Correcting Deformities of the Nose resulting from Traumatism; with a Report of Two Cases.* "Med. Rec.," April 2, 1892.

AN elevator—a sort of stout, blunt, two-pronged fork—is used as a lever, the superior maxilla being the fulcrum. With this the bones are forced into normal position, and a cast is at once made of muslin impregnated with plaster-of-Paris and laid aside. Next day a retentive apparatus is applied. It has two bone tips, which go inside the nose, attached to steel springs, connected with a forehead-band in such a manner as to project the fractured bones outwards against the plaster cast, which is adjusted externally. The whole apparatus is worn from two to four hours each morning and evening for about ten days. Dundas Grant.

Kowallek (Breslau).—*Correction of "Saddle-nose."* Inaugural Dissertation, Breslau, 1891.

THE author describes the method of Mikulicz, who corrected malformed noses by subcutaneous and subperiosteal operations, which do not cause cicatrices, followed by an orthopædic after-treatment. Michael.

Weir, R. F.—*How to Raise Sunken Noses.* "Med. Rec.," March 26, 1892. (Society Report.)

By making an incision underneath the lip and skin Dr. Weir was able in two cases to introduce a platinum bridge, which held up the skin, while its feet rested on each side of the nasal aperture. Dundas Grant.

Meijer.—*The Treatment of Ozena.* "Med. Rec.," April 2, 1892. (From "L'Union Méd. du Canada.")

THE anterior nares are first packed with dry cotton for twenty to thirty minutes to remove crusts and mucus. [We find something more than this necessary for the purpose.] The tube of a spray-apparatus is then introduced well into the cleansed nostril, and ten to twelve drops of a two per cent. solution of nitrate of silver are sprayed in. The strength of the solution is gradually increased up to twenty-five per cent. by the end of eight days. This is continued daily for a week, then every two days till crusts cease to be formed, which will be "a matter of a few weeks only."

Dundas Grant.

Stamm (Berlin).—*Etiology of Rhinitis Pseudo-Membranacea.*

IN three cases of disease the author has found Loeffler's bacillus.

Michael.

Botey, R.—*Electrolysis in the Treatment of Deviations and Thickening of the Nasal Septum.* "Archiv. Internat. de Laringologia, Otologia," etc., Nos. 8 and 9, 1891.

IN this communication the author refers to the pathology and cause of these affections, and he strongly recommends the use of the galvanocautery.

Botey.

Flasan (Berlin).—*Treatment of Rhinitis Atrophica Factida.* "Wiener Med. Woch.," 1892, No. 8.

REMOVAL of the secretion by probes and pincettes. Insufflation of iodine, tamponing of the nose by iodide wool.

Michael.

Ziem (Danzig).—*On the so-called Tornwaldt's Disease.* "Berliner Klin. Woch.," 1892, No. 6.

CONTROVERSIAL article concerning Chiari's paper.

Michael.

Pessar, L. A.—*A Simple Method of Removing Adenoid Vegetations in Children, with a Description of a New Curette.* "Archives of Pediatrics," May, 1892.

ACCORDING to the author's experience adenoids are best removed in several sittings without an anæsthetic rather than in one operation under anæsthesia. The author operates with three sizes of Lowenberg's forceps, the child being held on the knee of the mother or an assistant; a final scraping of the lateral walls and Rosenmüller's fossæ is made with a curette. The author says that after one or two sittings all except the very youngest children quietly submit to the operation, which is accomplished without pain or hæmorrhage. [American must be much more submissive than European children, who generally require something more than "moral suasion" to undergo this disagreeable operation!]

R. Norris Wolfenden.

Butts.—*The Removal of Adenoid Growths from the Vault of the Pharynx.* "Med. News," April 2, 1892.

THIS operator uses the "cradle forceps," with which he is successful; but different men have different pet methods—it is in fact largely a case of *chaque à son goût.*

B. J. Baron.

Nevins, Arthur E. (Manley, Staffordshire).—*The Naso-Pharynx in Influenza.* "Lancet," April 16, 1892.

THE writer holds that even in cases when there is comparatively little mucous discharge from the nose there is a severe inflammation of the whole mucous lining of the naso-pharynx, including the various sinuses, and that to this circumstance much of the characteristic depression owes its rise. He recommends as a means of affording immediate relief the spraying of the throat and nose with a lotion consisting of four grains of chlorate of potash, four minims of tincture of perchloride of iron, and one ounce of peppermint water. This is done up one nostril, and then, after a discharge of viscid mucus comes away, up the other. The process is repeated every two hours for the first twelve hours; then every four hours. He condemns antipyretics and purgatives. *Dundas Grant.*

Braislin (Brooklyn).—*Naso-Pharyngeal Stenosis.* "Med. News," Mar. 26, 1892.

THE author pleads for the thorough examination of the nose and naso-pharynx in all troubles of the respiratory tract where we have reason to believe they may be involved. The usual methods of treating stenosis in this situation are carried out by the author, and, in addition, he uses a porte-acide, which consists of a glass tube, bent and flanged at its extremity, through which, when it is in the naso-pharynx, the caustic acid can be carried on cotton wool or a brush. *B. J. Baron.*

MOUTH, TONGUE, &c.

Gutzmann.—*On Sigmatisms.* Verein für Innere Medicin in Berlin. Meeting, March 7, 1892.

THE author speaks of the position of the mouth which is necessary to produce the consonant S. The tongue must be kept behind the closed teeth. If there are anatomical malformations which prevent this position, the lisping pronunciation of the S cannot be cured. *Michael.*

Forcheimer, F.—*The Etiology of Stomatitis Aphthosa.* "Archives of Pediatrics," May, 1892.

THE author refers to the current ideas as the etiology of this affection, such as "struma," "scrofula," "tuberculosis," "malnutrition," "deranged stomach," "a manifestation of the foot and mouth disease," and "infection through milk." Bacteriological examination of the aphthæ for *contagium vivum* has led him to a negative result, only the presence of pus-producers having been found. We must look for some chemical agent carried into the circulation, and producing an eruption upon a mucous membrane. There are, probably, multiple causes, since aphthæ are associated with other diseases, *c.g.*, pneumonia, intermittent fever, gastro-intestinal disturbances, exanthemata, etc. The local lesion is looked upon by the author as herpetic, not following the course of any one nerve exactly, though in most cases it will be found to follow some branch of the fifth nerve, especially the lingual. Though aphthæ may occur in

several members of the same family, this is probably due less to local contagiousness than to the fact that all have been affected by the same primary cause.

R. Norris Wolfenden.

Ritter, P. (Berlin).—*Contribution to the Diseases of the Mouth and Teeth following Influenza.* "Allg. Med. Centralzeitung," 1891, No. 96.

ESPECIALLY in persons with carious teeth, influenza is often combined with swelling of the mucous membrane of the mouth and periosteum of the jaws. The author believes that the pathogenic micro-organism enters by the respiratory and digestive passages. He mentions two cases in his practice. For treatment he recommends the tincture of myrrh and alum.

Michael.

Ziem (Danzig).—*Air-containing Parotid Gland.* "Berliner Klin. Woch.," 1891, No. 38.

SPEAKING of a case published by Deichmüller, the author remembers that a similar case is mentioned by Hyrtl in his "Topographical Anatomy."

Michael.

Chappell.—*An Instrument for the Removal of Hypertrophied Tissue from the Base of the Tongue.* "New York Med. Journ.," Feb. 6, 1892.

THIS is a small guillotine for removing the large grey-coloured masses that we find in these cases, and it is said not to cause hæmorrhage.

B. J. Baron.

Grünwald (München).—*Electrolysis in the Upper Air-Passages.* "Deutsche Med. Woch.," 1892, No. 18.

THE author has applied electrolysis in twenty cases of chronic pharyngitis, in thirty-three cases of obstruction of the nose caused by swelling of the turbinateds, or by spines of the septum, in some cases of laryngeal tuberculosis, and one case of "pachydermia syphilitica" (prominent syphilitic tumours). He is satisfied with the result, and recommends the treatment.

Michael.

Toeplitz, Max (New York).—*Symmetrical Congenital Defects in the Anterior Pillars of the Fauces.* "Arch. of Otol.," Jan., 1892.

TWO symmetrical openings were observed in the palato-glossal folds of a patient, aged twenty-three. He had suffered when five from "pharyngeal croup" for an entire year. Both tonsils were absent. The openings were elliptical, about half an inch long, and three-sixteenths of an inch wide, and gave no idea of having originated in ulceration.

Dundas Grant.

Rosenberg (Berlin).—*The Tumours of the Base of the Tongue.* "Deutsche Med. Woch.," 1892, Nos. 13, 14.

REPORT on the publications on the subject, and some of the author's own experiences.

Michael.

Zeman.—*Foreign Body in the Pharynx.* "Wiener Med. Blätter," 1891, No. 46.

THE author showed a foreign body of a patient who died of hæmorrhage. In the *post-mortem* examination a piece of wood was found impacted in the pharynx, and had produced the lethal bleeding by erosion and perforation of the arteria laryngea superior.

Michael.

Pollard, Bilton (London). — *Retro-Pharyngeal Abscess in Infancy and its Treatment.* "Lancet," Feb. 13, 1892.

MR. POLLARD points out the error of supposing that most of these cases depend on spinal caries. They usually occupy the cellular tissue between the pharynx and the fascia covering the prævertebral muscles, whereas the spondylitic abscess lies beneath the fascia and ligament, in close contact with the vertebræ. Out of two hundred and four cases Bokai found only seven to depend on spinal caries. Four cases of retro-pharyngeal abscess are described, three under Mr. Pollard's own care and one under that of Mr. Dean. In the first case refilling returned twice after incision through the mouth, and Mr. Pollard then opened it externally, by Prof. Chiene's method (behind the upper end of the sterno-mastoid). In the other cases the same method was adopted. In no case was there any evidence of spinal disease; in all the abscess was unilateral. They appear all to have arisen as inflammation of the retro-pharyngeal glands, secondary to neighbouring local disease; in one case, tympanic abscess; in two, nasal catarrh. The internal and external methods of operation are described: the former easy but insusceptible of antiseptic treatment; the latter eminently advisable in respect of antiseptics, but, although presenting "no difficulty," involving "a cautious dissection with blunt instruments behind the deep vessels and nerves of the neck." [The selection must depend a good deal on surrounding circumstances. Bokai has expressed the opinion that retro-pharyngeal abscess should be opened internally in all cases except those arising from spondylitis or foreign bodies.—ED.]

Dundas Grant.

Gerster.—*A Contribution to the Surgery of the Œsophagus.* "New York Med. Journ.," Feb. 6, 1892.

THE author agrees with Fischer that if a foreign body is lodged in the gullet and cannot be displaced downwards into the stomach, nor extracted without the employment of much force, an external œsophagotomy is imperative. The conditions and rules are those governing strangulated hernia. Cutting rather than tearing is advocated, in order to reach the œsophagus. The details of the operation and cases illustrative are given in the paper.

B. J. Baron.

Kocher (Berne).—*Diverticulum of the Œsophagus and its Treatment.* "Corresp. für Schweizer Aerzte," 1892, No. 8.

THE author has operated upon two cases of this abnormality with good result. In the first case the diverticulum was situated on the right side of the neck, and could be diagnosed with certainty. The symptoms had been very severe, the patient could not swallow without great difficulty, and a great deal of the food regurgitated, especially if he compressed the neck. During the last few years he could only swallow liquid food. The operation consisted of extirpation of the sac and sewing up. During the few weeks following the operation the patient was fed by the œsophagus catheter. In the second case the symptoms were nearly the same. Here the sac was ligated, and then burned with Pacquelin's cautery. The mucous membrane of the œsophagus was sewn around the stump. This case was also perfectly cured.

Michael.

LARYNX, &c.

Wilks, Samuel (London).—“*The Laryngoscope in England.*” “*Lancet*,” March 12, 1892.

DR. WILKS, in reproaching the Editors of the “*Lancet*” for omitting, in an annotation on this subject, the names of Dr. Walker, of Peterborough, and Dr. Benjamin Babington, quotes the following from a reference to a meeting of the Hunterian Society in March, 1829: “Dr. Babington submitted to the Society an ingenious instrument for the examination of parts within the fauces, not admitting of inspection by unaided sight. It consisted of an oblong piece of looking-glass, set in silver wire, with a long shank. The reflecting portion is placed against the palate, whilst the tongue is held down by a spatula, when the epiglottis and upper part of the larynx become visible in the glass. A strong light is required, and the instrument should be dipped in water, so as to have a film of fluid upon it when used, or the halitus of the breath renders it cloudy. The doctor proposed to call it ‘glottiscope.’”

Dundas Grant.

Downie, J. Walker (Glasgow).—*Some Conditions hindering Clear Vocalization.* “*Practitioner*,” March, 1892.

NASAL polypi and thickening of the nasal mucous membrane are enumerated among the more ordinary conditions. The writer considers that an elongated and dependent or a “conduplicate” epiglottis, especially if congested, may affect the voice. A more troublesome condition is a relaxed state of the mucous membrane covering the ventricular bands. The appropriate remedies for the “grosser” lesions are recommended. For the relaxed ventricular bands the galvano-cautery is given first place. Rest is enjoined, and alcohol and tobacco prohibited.

Dundas Grant.

English, W. T. (Pittsburg).—*The Singer's Thorax.* “*Med. Rec.*,” March 5, 1892.

DR. ENGLISH gives rather an alarming account of the vocalist's prospect of life and health. He assumes that because the physiological ratio of respirations to cardiac pulsations is about one to four, the prolonged expiratory process involved in the sustained production of vocal sound is necessarily injurious. He states that it leads to irregular contractions of the heart and a permanent state of unstable equilibrium. The signs of this are at first “a sighing or simple desire for longer inspiration, apparent in the quiescent state of the subject,” and shortness of breath. The chest becomes expanded and barrel-shaped, but the amount of mobility of the chest is not increased in proportion, the environments assuming an abnormal rigidity. The heart takes on an undue augmentation in bulk. The author recognizes a peculiar disposition to neurotic irritability of the heart in singers. He considers that chest diseases are

in vocalists singularly fatal. "Pneumonitis" claims as fatal fifty per cent. of the vocalists attacked. The diagnosis is founded on the largeness and shape of the chest, and the disproportionate slowness of inspiratory expansion, the thoracic movements being superficial and accelerated. The chief heart-sign is accentuation of the second sound. He insists that no one should enter upon vocal study who has any sign of cardiac debility.

Dundas Grant.

Stuart, T. P. Anderson (Sydney).—*On the Mechanism of the Closure of the Larynx*. "Lancet," April 2, 1892.

IN a preliminary communication made to the Royal Society on February 21st, 1892, the author gave some results of observations made in the following various ways :—(1) On a man, who had a large hole in the side of his neck, a result of an operation for epithelioma, through which the movements of deglutition, simple closure of the larynx, etc., could be observed ;—(2) by laryngoscopic examination of healthy persons ; (3) by experiments on the different classes of animals ; (4) by study of the anatomy and comparative anatomy of the parts ; (5) by clinical and *post-mortem* records of morbid conditions. When simple closure is effected in man the chief visible movement is that of the *arytenoid cartilages*. They are (1) rotated, so that the vocal processes (eventually) come into apposition ; (2) they glide forwards on the cricoid ; (3) they approach each other, so that their internal surfaces are, in part at least, in contact ; (4) they fold forwards at the crico-arytenoid joint, so that their tips come into contact with the epiglottis. The *ary-epiglottic folds* become tightened (by means of the contained ary-epiglottic muscles), pulling inwards the lateral margins of the epiglottis, and so deepening its groove to receive the tips of the arytenoids and the Santorinian cartilages. The entrance thus assumes a T shape. The *entire larynx* moves slightly upwards and forwards (much less in simple closure than in deglutition). The *epiglottis* does not actively move, and in deglutition the bolus is seen to glide over its laryngeal surface, its lingual surface being pressed against the dorsum of the tongue.

[Dr. Philip Smyly, of Dublin, in his Presidential address before the British Laryngological Association on November 15th, 1889, gave the following description of the closure of the larynx, to which Prof. Anderson Stuart cannot be said to have added any new feature :—"The glottis is "raised towards the base of the tongue, the arytenoids are drawn "together, the epiglottis is drawn into the fossa prepared for it in the "base of the tongue, at the same time projecting the laryngeal end "towards the arytenoids. The meeting of these three bodies closes the "cavity of the larynx, and the closed larynx looks exactly like a very large "leech-bite. The morsel of food passes over the base of the tongue and the "laryngeal aspect of the epiglottis, and the rounded, smooth surfaces of "the two arytenoids into the œsophagus." (JOURNAL OF LARYNGOLOGY, vol. iii., p. 494.)

Still earlier, Mr. Carmalt Jones, in a paper read at the Ninth International Medical Congress, Washington, September, 1887, brought forward his laryngoscopic observations, showing that the lateral borders of the epi-

glottis were approximated to each other during deglutition, the epiglottis itself remaining erect. (JOURNAL OF LARYNGOLOGY, vol. i., p. 431.) We hope we have heard the last of the "lid-like" action of the epiglottis.]

Dundas Grant.

Carson, Edwin (San Diego).—*Tumour of Vocal Cord; Removal.* "Med. Rec.," February 27, 1892.

A FIBROMA of two years' duration. Removal after ten days' education. A forceps with a downward curve $3\frac{1}{2}$ inches in length was found to be too short, and one of $3\frac{1}{8}$ inches was necessary.

Dundas Grant.

Baumgarten (Budapesth).—*Laryngo-Œdema following the Use of Iodide of Potash.* "Deutsche Med. Woch.," 1892, No. 9.

A PATIENT, forty-six years old, was infected from her husband with syphilis. Iodide of potash was used, followed by an acute œdema of the whole larynx. Ice and scarifications produced a cure.

Michael,

Bryan (Washington).—*Acute Œdema of the Larynx, with the Report of a Case resulting from Pyæmia.* "The Medical News," Feb. 6, 1892.

THE œdema was epiglottic, and improved rapidly under full scarification, the use of ice, &c. The history was an unusual one. On November 9th the patient contracted gonorrhœa. On January 9th a urethral sound was passed for the relief of a deep-seated stricture, and again, on January 26th. The patient had a shivering fit after the latter operation, and was ill until February 1st, when he experienced pain in the larynx and great dyspnœa, and he noticed that his neck was swollen. On February 4th he complained of pain at the lower border of the left lung, with deficiency of breath sounds, but no dulness on percussion. On February 6th pronounced jaundice appeared, and on February 8th he suddenly died, after exclaiming that something had given way inside. This was, probably, a hepatic abscess. Numerous authors are quoted as showing that laryngeal œdema is often due to septicæmia, and is usually secondary. Primary œdema is, however, sometimes seen, and Virchow's opinion is that it is then of erysipelatous origin. Hajek's experiments on animals, to discover the parts most prone to œdematous infiltration, are alluded to, and are important. These go to show that there is a layer of loose cellular tissue on the anterior surface of the epiglottis, that passes up to within half a centimètre of its border, and there ceases. From this point the membrane is firmly adherent to the cartilage. This cellular tissue on the anterior surface of the epiglottis is continuous with that lining the lateral walls of the pharynx in front of the pharyngo-epiglottic ligament. The cellular tissue of the ary-epiglottic folds is divided into two parts by the pharyngo-epiglottic ligament. Hence an inflammation of the pharynx may extend to the anterior surface of the epiglottis, or it may attack the ary-epiglottic folds, as it is on a plane anterior or posterior to the pharyngo-epiglottic ligament. Œdema never passes from the anterior to the posterior surface of the epiglottis, and it only passes over into the ary-epiglottic folds when the infiltration is so extensive as to break through the ligament. Extensive and deep scarification, and gargling with hot water to induce

ree flow of the fluid. Leiter's coil and ice, with injection of pilocarpin are to be relied on. If these fail, early tracheotomy should be practised.

B. J. Baron.

Compaired.—*Hæmorrhage from the Larynx coincident with the Menstrual Period.* "Siglo Medico," Jan., 1892.

AFTER citing the two cases recorded by Ruault and Moure, in which laryngeal hæmorrhage took place, one from reflex utero-ovarian cause, and in another of the same affection with paralysis of the constrictor muscles, with a small red tumour of the vocal cord which coincided with the menstrual periods, the author records two observations in his *clinique*. In the first, a young lady, twenty-five years of age, somewhat hysterical, had suffered for the last two years from menstrual disorders. Under treatment, the menstrea reappeared, but were copious, and were again suppressed at the end of two months, hæmorrhage taking place from the larynx at a time corresponding to the menstrual period, coinciding with the appearance of a pharyngo-laryngeal catarrh. Small hæmorrhagic points could also be seen. In the second case, a girl, aged twenty-one, was seen, who had not menstruated for a year, and who suffered from laryngitis at each period. At the time corresponding to the periods she had sanguineous expectorations. The patient was excessively nervous; there was chlorosis, accompanied with exophthalmic goitre and tachycardia. As in the last case, the larynx showed marked hyperæmia. The patient died from heart disease somewhat later. The author refers to these as hæmorrhagic laryngitis or sanguineous expectorations from the larynx. The cause may be catamenial or not; but he is inclined to think that the discharge is never pure blood, but only more or less sanguinolent serum.

Botey.

Baumgarten (Pesth).—*Rare Cases of Perichondritis of the Larynx.* "Wiener Med. Woch.," 1892, No. 7.

1. A PATIENT, seventeen years old, some weeks before swallowed a chicken-bone. He did not know if he had coughed it out. It was not seen laryngoscopically. He had a swelling of the left ventricular band and the total left half of the larynx. Of the left ventricle; discharge of pus. Treatment by ice and scarifications. Some weeks later a part of the left arytenoid cartilage exfoliated. Cure.

2. A patient, twenty-seven years old, having caught a cold, had difficulty in swallowing and dyspnœa. The left half of the larynx was swollen; discharge of pus. Some weeks later exfoliation of parts of the left arytenoid cartilage. Cure.

3. A patient, thirty years old, having caught a cold, followed by hoarseness and pains in the larynx. Two months later the right half of the larynx was swollen and sensitive. The laryngoscope showed œdema, and a tumour of the size of a walnut covering the right vocal band. It was removed by forceps and consisted of normal mucous membrane filled with pus. The author diagnosed idiopathic perichondritis, but another physician believed that there was tuberculosis. The patient would not be treated. Two months later the patient brought the left half

of the cricoid cartilage, which he had coughed out. Some time later he also coughed out the right half of the cricoid cartilage. Then the patient got better and the cartilage could be felt in the neck; the ventricular bands covered the vocal bands so that the voice remained hoarse. In all three cases syphilis was not present.

Michael.

Bosworth, F. H. (New York).—*Sub-Glottic Laryngitis or Catarrhal Croup as one of the Manifestations of Lymphatism.* "Med. Rec.," Dec. 19, 1891.

IN some cases of croupous attacks in which there were enlarged tonsils, faucial, pharyngeal, or lingual, and no evidence of pseudo-membrane, Bosworth attributed the trouble to lymphatic affection in the sub-glottic larynx. Laryngoscopic examination, when possible, sometimes showed the local swelling. He effected cures by removal of the affected tonsils, and the frequent repetition of palpable doses of the syrup of the iodide of iron. In older patients the condition was observed to produce vocal weakness or barking cough, and such remarkable improvement followed the removal of the enlarged lingual tonsil that he was led to assume the existence of some direct relation between the two parts.

Dundas Grant.

Tymowsky.—*Treatment of Laryngeal* Ulcers by Resorcin.* "Wiener Med. Presse," 1891, No. 52.

THE author has applied the treatment in many cases with good results.

Michael.

Michelson, F. (Königsberg).—*Relation between Pachydermia Laryngis and Tuberculosis.* "Berliner Klin. Woch.," 1892, No. 7.

IN three cases of seventeen of pachydermia laryngis, and in two cases of eighteen of the same affection, Krieg and Michelson have found tuberculosis of the larynx and lungs. In one of the cases carefully examined after death, the author found the development of pachydermia in the circumference of tuberculous ulcers. The author concludes that pachydermia and tuberculosis can produce affections of great resemblance, and that both diseases can be found combined in the same larynx.

Michael.

Robinson, Beverley (New York).—*On the Use of Creosote in the Treatment of Pulmonary Phthisis.* "Med. Rec.," Feb. 27, 1892.

THIS is a strong recommendation of the creosote treatment. Dr. Robinson claims for it the power of benefiting the general symptoms, diminishing cough and expectoration, improving nutrition and respiration, inhibiting night-sweats, possibly destroying bacilli, and leading to quiescence of local lung mischief. These results have ensued in cases in which other approved methods had in vain had a thorough trial.

The drawbacks are few. The stomach may rebel, and it is then necessary to diminish the dose for a while, or even interrupt its use, resuming its administration in small and slowly increasing quantities. It is advisable to examine the urine, as Flint has found reason to fear injurious action on the kidneys. Robinson says that ordinary tests do not show the presence of creosote in the urine. As regards hæmoptysis, he has not been able to corroborate Dujardin-Beaumetz's view that

creosote congests the bronchial mucous membrane, but he acts on it to the extent of interrupting the administration during the continuance or threatening of hæmoptysis.

The kind of creosote seems to be important. He employs only that derived from beech-wood.

The dose he gives is a half to one minim, increased in frequency from three or four times daily to every two hours, if the stomach does not become intolerant. He sees no particular advantage in oily subcutaneous injections. As an adjunct he employs continuous inhalation in a perforated zinc respirator of a dilution (1 to 8) of creosote in alcohol. The duration of the inhalation is at first to be short. He quotes several opinions in support of his favourable impressions in regard to the drug. One physician gave it in pills, another in capsules, containing two minims of creosote and four grains of subcarbonate of bismuth, or by rectal enema—"twenty to twenty-five drops of pure creosote with one or two ounces of almond oil, and beaten up gradually with the yolk of one or two eggs, subsequently thinned a little by the addition of a few drops of water, and injected on retiring two or three times a week." Another begins with two drops dissolved in two drachms of whisky added to a glass of milk after meals.

Dundas Grant.

Mündler, W.—*Three Cases of Actinomycosis of the Larynx.* "Brun's Beiträge zur Klin. Chir.," Band 8.

IN three cases of the disease not only the under jaw, but also the connecting tissue of the larynx, was infiltrated.

Michael.

Baumgarten (Budapest).—*The Relation between the Diseases of Pharynx and Larynx and Anomalies of Menstruation.* "Deutsche Med. Woch.," 1892, No. 9.

(1) A WOMAN, forty-six years old, had not menstruated for two months. During the days in which the menstruation ought to have occurred she became hoarse, and expectorated blood. The laryngoscope showed the place of the bleeding on the right vocal band near the commissure. (2) A younger lady always had a little hæmoptysis if menstruation came too late. (3) A lady in the climacteric period became aphonic at the time when menstruation was expected. (4) Acute swelling of chronic enlargement of the thyroid during menstruation. (5) A girl, twenty years old, always became hoarse if the loss of menstrual blood was stronger than usual. Paralysis of the inter-arytenoides.

Michael.

Nicoll, James H. (Glasgow).—*Laryngeal Chorea.* "Lancet," Mar. 12, 1892.

FOUR cases of "vocal asynergy" are described. The first, a boy aged eight, was for several months troubled with a peculiar cough—"a sudden, single, sharp, dry cough," unlike that of laryngitis, bronchitis, or pharyngitis. It ceased during sleep, but sometimes made it difficult to get to sleep. After ten months general chorea came on, and the cough became more intense *pari passu* with the paroxysms, disappearing with them in about a year. The second, a lad of fourteen, had a troublesome, hacking cough, which recalled the features of the previous case. No general muscular spasms were present, but the soft palate exhibited

frequent twitchings of momentary duration. The vocal cords performed their voluntary movements normally, but when left to the passive movements of respiration exhibited frequent jerky movements of unequal extent to and from the middle line. Near the junction of the posterior with the middle third of these was a reddish spot on the right cord, where the cord was frequently thrown into a kink or angle, convex outwards. Subsequently mild general chorea supervened. The third case was that of a healthy-looking girl of fifteen, who complained of a dry cough. She had choreic movements in the forearm and fingers, and on laryngoscopic examination irregular movements of the vocal cords towards the middle line were seen to occur frequently. The muscles elevating and depressing the larynx were in frequent choreic movement. *Dundas Grant.*

Katzenstein (Berlin).—*Median Position of the Vocal Bands.* "Virchow's Archiv," Band 121, Heft 1.

COMPARE the report on the transactions of the Laryngological Society in Berlin. *Michael.*

Petersen (Würzburg).—*Contribution to Intubation of the Larynx.* "Deutsche Med. Woch.," 1892, No. 9.

REVIEW on the publications of intubation. In a case of papilloma of the larynx the method was tried without relief to the patient. Tracheotomy. Death by pneumonia. *Michael.*

Köhler (Berlin).—*Casuistic Contribution to the Chapter of Laryngo-fissure.* "Berliner Klin. Woch.," 1892, No. 8.

A PATIENT, fifty-four years old, had increasing hoarseness for a year. The laryngoscope showed that the posterior laryngeal wall was covered by a warty, greyish red neoplasm; the mobility of the right vocal band was diminished. The microscopical examination of a piece showed that there was a carcinoma. Laryngo-fissure was performed, followed by extirpation of the neoplasm by scissors and galvano-cautery. Cure. *Michael.*

Wagner, Richard (Halle-a-S.).—*Case of Tracheal Stenosis produced by cutting through the Trachea. Casuistic Contribution to the Median Position of the Vocal Bands following Dissection of the Recurrent Nerves.* "Münchener Med. Woch.," 1892, No. 10.

A PATIENT, twenty-five years of age, tried to commit suicide. With a large knife she cut through the largest part of the trachea and dissected the right recurrent nerve. A tracheal canula was introduced. The author examined the patient fourteen days later, who could not respire if the canula was closed. The laryngoscope showed retroflexion of the epiglottis, swelling of both ventricular bands, the right vocal band mobile in the median position, and the left mobile. Tracheoscopy showed that the upper part was closed by two half-globular swellings. Cure was effected by Schrötter's hard rubber and tin bougies. Surgical reunion of the tracheal wound. He used the occasion for experiments on the existence of taste in the larynx. He introduced tasting substances by the tracheal wound, and could make out that sweet and bitter could be detected in the larynx. *Michael.*

THYROID GLAND, &c.

Hertig.—*Therapeutic Application of the Thyroid Gland.* "Wiener Med. Blatter," 1891, No. 73.

REPORT on the experiments of Murrey and Fenwick to cure myxœdema and cachexia by application of an extract of the strumous gland.

Michael.

Canizzaro (Catania).—*Function of the Thyroid Gland.* "Deutsche Med. Woch.," 1892, No. 9.

By injection of blood of healthy dogs the author could prevent the cachexia following extirpation of the gland in animals whose thyroid gland was totally extirpated. The blood of dogs which had no thyroid gland was useless. Cases of epilepsy treated by injection of the fluid of the thyroid gland were improved.

Michael.

Korangi.—*Thyroiditis.* Königliche Gesellschaft der Aerzte in Buda-Pesth. Meeting, Mar. 26, 1892.

THE author has observed forty cases of inflammation of the normal and enlarged gland. All patients were females. In all cases, fever, intumescence, and pain of the gland. The treatment consisted in application of iodine and mercury and antiphlogistics.

Michael.

O'Reilly, G. J. (London).—*Treatment of Goitre by Iodine, Mercury, and Potash Injections, and Radical Cure by Operation.* "Lancet," April 2, 1892.

A WOMAN, aged forty-two, was the subject of a goitre of about six pounds in weight which caused great dyspnœa. It appeared to contain several cysts, which consolidated after frequent injections of perchloride of mercury with iodine and with permanganate alternately, in strengths varying from 1 in 10,000 to 1 in 500. By means of a double-barrelled syringe some of the cystic fluid can be withdrawn and the drug at once injected without removing the needle. Later the right lobe, weighing two pounds, was removed by operation.

Dundas Grant.

Alsberg.—*Strumectomy.* Aertztlicher Verein in Hamburg. Meeting, April 5, 1892.

THE author showed a girl, fourteen years old, upon whom he had performed partial strumectomy for dyspnœa. He did not perform tracheotomy, and believes that it should not be performed if it can be avoided, because the discharge of the secretions of the trachea may prevent antiseptics of the wound.

Michael.

Shields (Richmond).—*The Treatment of Goitre by Electrolysis.* "New York Med. Journ.," Dec. 19, 1891.

THE current was generated by fifteen to thirty cells, the *labile* method was employed, the electrodes were applied to the skin, and three out of four

cases of fibro-cystic goitre were cured after they had resisted the usual treatment. The sittings lasted from twenty to thirty minutes, and were from two to six days apart, and the cases were under treatment from six weeks to six months.

Barclay J. Baron.

Wiesmann (Herisau).—*Communications from the Hospital in Herisau.* "Correspl. für Schweizer Aerzte," 1892, No. 2.

1. *Extirpation of a Cystic Goitre of nine pounds weight.*—A patient, fifty-six years old, had on his neck a round, nearly pendulous tumour hanging down on to his breast. It had a circumference of 82 centimètres, was elastic and fluctuating. Extirpation. Cure.

2. *Rhinolith.*—A cherry-stone was the centre of a rhinolith removed from a patient sixty-two years old; it caused strong fetor of the nose. The patient did not remember that she had introduced the stone, and she had had no ozæna.

Michael.

James, Prosser (London).—*Cystic Goitre.* "Lancet," April 9, 1892.

THE author states that he had for many years used in the treatment of cystic goitre such a double-barrelled syringe as Mr. O'Reilly recommends. In moderately recent cases he obtained success by withdrawing a small quantity of cyst fluid, and replacing it by alcohol, or by a solution of iodine. In old cases such results were not obtained, and in cases of large cysts the fluid was usually too flocculent to pass through the needle without blocking it.

Dundas Grant.

Eiselberg (Wien).—*Successful Implantation of the Thyroid Gland of a Cat in the Abdomen, and Tetanus following its Extirpation.* "Wiener Med. Woch.," 1892, No. 5.

THE author twice extirpated the thyroid gland of a cat, and implanted it in the peritoneum. The animals lived, and had no symptoms of cachexia. One month later he extirpated the gland from its new place. He found the gland normal, and nourished by some new blood-vessels. Within a few days the animals were ill, and had complete tetanus. He holds it proved that the extirpated and implanted gland supplied the functions in its normal place. The author proposes to treat such cases, in which total extirpation of the thyroid gland is necessary, by implantation of thyroid tissue in another place, to prevent the symptoms of cachexia.

Michael.

Lemke (Hamburg).—*Further Contribution to the Surgical Treatment of Morbus Basedowii (Graves' Disease).* "Deutsche Med. Woch.," 1892, No. 11.

THE two cases some time ago published are in good health. In a third case the author has extirpated the right half of the gland. The patient was cured; the exophthalmos disappeared, but she died some time later from bronchitis. Also in a fourth and fifth case the symptoms disappeared after the extirpation of the goitre.

Michael.

Stierlin.—*Further Contributions to the Extirpation of Basedow's Disease (Graves' Disease).* "Bruns Beiträge zur Klin. Chir.," Band 8.

COMMUNICATION of three new cases of the clinic in Zürich in which Basedow's disease was improved by extirpation of the goitre. Twenty-nine

cases have recently been operated on in this manner ; in twenty-two of them improvement or cure of the disease followed operation. *Michael.*

Stillér. — *Cure of Göttré by Ligature of the Thyroid Arteries.* Inaugural Dissertation. Breslau, 1891.

THE author publishes three histories of operations performed in this manner. He reports also thirty-nine other cases from the literature, and recommends this method of treatment. *Michael.*

Strübing (Greifswald).—*Fistula colli congenita mediana.* "Deutsche Med. Woch.," 1892, No. 9.

DESCRIPTION of a case, and report on the newest views of the origin of this anomaly. *Michael.*

Beck, Carl (Chicago).—*Congenital Bilateral and Symmetrical Cartilages on the Neck, and their Morphological Significance.* "Med. Rec.," Feb. 13, 1892.

A DESCRIPTION of a case, with a discussion of numerous other cases recorded, and their morphology. They appear to be remnants of the third or fourth branchial arch. One important point in their anatomy is that, though apparently quite superficial, they usually have a flattened process, dipping down and losing itself on the sheath of the deep vessels. In a typical dissection the nodule was superficial to the platysma, but under the external jugular. *Dundas Grant.*

Kramer (Gropglogan).—*Treatment of Tuberculosis Abscesses of Retro-visceral Space.* "Centralbl. für Chirurgie." 1892, No. 12.

JUST now abscesses of the retro-pharyngeal space are opened by the mouth. In this manner the pus cannot be removed completely, and an antiseptic procedure is not possible. Therefore the author proposes to open them in the neck, followed by treatment with the sharp spoon and tamponing with iodoform gauze. He describes a case in which the method was applied with the best result. *Michael.*

THE EAR.

Baber, E. Cresswell (Brighton).—*A Tragus Retractor.* "Arch. of Otol.," Jan., 1892.

A FLAT metal ring to fit the tip of the surgeon's forefinger. From it projects a flat piece of metal, which forms a blunt hook. This is so adapted as to press forwards the tragus while the other fingers of the same hand are employed in pulling the auricle upwards and backwards [This is calculated to replace the bent hair-pin or other retractor which for a similar purpose involves the use of another hand if for any reason the use of a speculum is contra-indicated.] *Dundas Grant.*

Pritchard, Urban (London).—*A Handy Form of Intra-Tympanic Syringe.* "Arch. of Otol.," Jan., 1892.

A FINE, straight tube, to the point of which a curved tip can be fitted, suitable for penetrating a perforation in the membrane of Shrapnell, has attached to it at an angle a small india-rubber reservoir, which can be compressed against a plate by means of the thumb. The plate is in one piece with the tube, so that the tilting of the point is comparatively slight. Strict sterilization with alcohol is necessary after each time of use.

Dundas Grant.

Sheild, A. Marmaduke.—*A Mass of Lead Impacted in the Tympanic Cavity and Removed by the Aid of Metallic Mercury.* "Lancet," April 30, 1892.

A SPLASH of molten lead burned the side of a plumber's head and his ear, causing intense pain. When the swelling from the burn subsided, it was found that there was a hard mass of lead deeply imbedded in the ear. There was total deafness on that side, and fetid otorrhœa, but no loss of "bone-conduction" nor facial paralysis. Metallic mercury was poured into the ear to form an amalgam. This was frequently done with intermissions (for sixteen hours in the aggregate). Next day the mass was felt to move, the effluent mercury having been blackened, and vigorous syringing resulted in the expulsion of the whole.

Dundas Grant.

Sheild, Marmaduke (London).—*Aural Polypi.* "Lancet," May 28, 1892.

MR. SHEILD insists on aural polypi being regarded as "symptoms of a local disease." For a cure this local disease requires careful and prolonged treatment after the removal of the polypus. He dwells on the risk of pyæmic infection or cerebral lesions starting from the operation for polypus, especially if exposure to cold follows the manipulation, or if septic suppuration be allowed to occur. He is therefore particular to purify the ear before operating, using especially solutions of boracic acid in alcohol, which has the additional property of drying and partially hardening the growth. He is in favour of the use of a delicate snare for pediculated polypi of any size. Sessile growths and grandulations may be lacerated and broken up by means of curettes, and then cauterized with chromic acid or galvano-cautery. He is very chary about curetting out the tympanum, but is more ready to open the mastoid.

Dundas Grant.

Sheild, A. Marmaduke (London).—*A Case of "Sarcomatous" Growth in the External Auditory Canal.* "Arch. of Otol.," Jan., 1892.

A YOUNG lady had otorrhœa since childhood, and at about ten years of age had been lanced behind the ear, a closed sinus remaining. When seen, she complained of pain and giddiness, and had a fetid discharge from the ear, watery, and often blood-stained. The canal was completely blocked by a growth of the size of a large cherry, of a pale gelatinous aspect. It was removed with some difficulty, but after a month underwent obvious regrowth. Microscopical section showed that "the ground substance, especially near the hilum, is composed of embryonic tissue, with spindle-shaped, round or irregular cells, some having many nuclei, and having the character of myeloid cells." Dr. Delepine considered it a

sarcoma. The growth was again removed, the site being freely cleared by gouging and cauterizing. It was found that a curved probe could be passed through a sinus at the site of the growth into the mastoid cells. Peroxide of hydrogen was syringed through it daily for a week. The growth did not recur. Mr. Sheild seems to consider this a benign growth in spite of its histological characters, and comparable to the fungoid granulations found round necrosed bone in other parts of the body.

Dundas Grant.

Clark, E. S. (San Francisco).—*A Case of Injury to the Ear by a Stroke of Lightning, with Perforation of the Membrana Tympani.* "Arch. of Otol.," Jan., 1892.

THE external ear and meatus, the arm and breast, were burnt; tinnitus, deafness, and discharge from the ear ensued. The discharge was soon stopped, and treatment of the middle ear improved the hearing considerably. Dr. Clark thinks that the drum-head was ruptured directly by the lightning stroke, and not by extension of inflammation from the external ear.

Dundas Grant.

Downie, Walker (Glasgow).—"Lancet," March 5, 1892, and

Stewart, W. R. H. (London).—"Lancet," March 12, 1892,

STATE that severe cases of influenzal otitis have been observed by them in which there was no pre-existent ear affection.

Dundas Grant.

Dalby, Sir Wm. (London).—*Note on the Effects of Influenza on the Middle Ear.* "Lancet," Feb. 20, 1892.

THE writer draws the following conclusion from his observations during the recent epidemics, namely: that a person with healthy ears has little to dread from influenza, so far as this mucous surface is concerned, but it may become a serious trouble to one whose ears have formerly been the seat of inflammation. [We cannot say that our own experience during the epidemics enables us to adopt the cheerful view held by Sir William Dalby. Some of our worst cases have occurred in persons who, to all appearances, had never previously suffered with their ears. The cases under our observation were severer and more intractable in each successive outbreak.—ED.]

Dundas Grant.

Zimmermann, Charles (Milwaukee).—*A Case of Orbital Cellulitis and Primary Mastoiditis complicating Influenza.* "Arch. of Otol.," Jan., 1892.

ORBITAL cellulitis set in two days after the onset of influenza in a girl ten years of age. Five days later this diminished considerably, but severe pain came on in the left mastoid process. The meatus was narrowed by swelling of its walls, and plugged with epidermic scales. Under constant use of the ice-bag this quieted down, but returned after ten days, the pain being more intense, radiating over the neck, head, and left shoulder. There was distinct pyrexia and constitutional disturbance, the mastoid was tender, and *acute mastoiditis acuta* was diagnosed. There was no sign of periostitis; but as no relief followed cold applications for two days, the mastoid was opened, and found to be full of red, spongy

fungoid granulation tissue. Rapid improvement followed. The author compares the very conflicting evidence of various observers as to the frequency with which the middle ear and its accessory cavities are seriously involved in influenza. He is in favour of an *early* operation in mastoiditis.

Dundas Grant.

Pepper, A. J.—*On Disease of the Temporal Bone.* "Lancet," March 5, 1892.

MR. PEPPER holds that few subjects of chronic mastoid suppuration would lose their lives if rational surgical treatment were carried out, for even in the worst cases—providing, of course, that intra-cranial mischief and pyæmia had not commenced—free opening should give relief and obviate danger. In acute cases he would not wait for fluctuation, œdema or redness. If an acute tympanic abscess discharges itself, and after a temporary improvement there comes on deep-seated aching in the bone, and pressure or percussion increases the pain, he would at once open the mastoid. There is liability to endo-cranial suppuration, thrombosis of the lateral sinus, and pyæmia. Given a certain diagnosis of a septic thrombosis he would not hesitate to lay it open. He states that abscess is more common in the cerebellum than in the temporo-sphenoidal lobe, except in very early life, when the reverse obtains. [This will be new to some readers.] He gives the following reasons why cerebral abscess is the rule in young children: 1. The petro-mastoid and squamosal bones only undergo ossific union during the first year of life; therefore pus may readily extend to the cranial cavity: 2. The mastoid process and cells are not developed. Facial paralysis, deep suppuration in the neck, recurrent external mastoid abscess, necrosis of the posterior wall of the meatus, implication of the temporo-maxillary joint, and sclerotic otitis of the mastoid bone are the other conditions discussed.

Dundas Grant.

Black, Alex. (Edinburgh).—*Perforation of the Mastoid for Middle Ear Disease.* "Lancet," March 26, 1892.

ON the suggestion of Dr. Hunter Mackenzie, Dr. Black employed a gimlet with a small point to make the primary opening into the cavity. This opening is then enlarged by means of one or more cone-shaped burrs. Drainage is kept up by a tube of spiral wire.

Dundas Grant.

Hatch, W. K. (Dombay).—*Acute Otitis; Cerebral Abscess; Operation and Death.* "Lancet," March 19, 1892.

ACUTE otitis of both ears occurred in March, 1890, followed by perforation and, in two months, by healing of the membranes and apparent recovery. Pain in the right side of the face and neck came on in July, and after a time disappeared, but returned in August. There was no circumscribed localization of pain; the neck was not tender, but there was loss of flesh. The patient became unfit for work and stupid, but without fever. On trephining an inch and a quarter above and behind the meatus, and exploring with a trocar for about three-quarters of an inch, about an ounce and a half of healthy pus was evacuated. The patient was freed from pain, but died next day.

Dundas Grant.

Jones, Macnaughton (London).—*Rule and Scale for Use in Trephining the Skull in Cases of Aural Disease.* "Lancet," March 5, 1892.

THIS is a four-inch rule marked in fractions of an inch, and accompanied by an ivory slip, on which are printed the measurements needed in trephining the antrum, cerebrum, or cerebellum, as published by Birmingham in the "Dublin Journal of Medical Science," Feb., 1891. They are thus set out :—

GUIDES TO TREPHINING THE SKULL.

- L.S. = $1\frac{1}{8}$ in. behind M. \times level with upper border.
 T.S.L. = $1\frac{1}{4}$ behind M. \times 2 in. above it.
 M.A. = $\frac{1}{12}$ in. above level of and behind m; depth $\frac{3}{8}$ in. to $\frac{3}{4}$ in.
 C. = 2 in. behind M. \times 1 in. below R.B.L.

EXPLANATION OF MARKING.

- | | | | |
|--------|---------------------------------|--------|------------------------|
| L.S. | Lateral sinus. | M. | Centre of bony meatus. |
| T.S.L. | Temporo-sphenoidal lobe. | M.A. | Mastoid antrum. |
| C. | Cerebellum. | R.B.L. | Reid's base line. |
| m. | Superior margin of bony meatus. | | |

Dundas Grant.

Mongardi, Romeo.—*Contribution to the Cure of Ménière's Disease.* "Bolletino delle Mal. dell' Orecchio, della Gola e del Naso," Feb., 1892.

THE author, after referring to several clinical cases of patients who presented the more common symptom of Ménière's disease, declares that he obtained excellent results, especially for stopping the vertigo, with the following formulæ :—

R—Potas. bromid., ζ ix., in pulv., 12 div. S. as directed.

R—Ferri valer., gr. xv.; opii pulv., gr. iv.; pulv. et ext. cascarae sagrad., q.s. ut fiant. Pil 12. S. as directed.

Mongardi suggests that a powder dissolved in half a tumbler of water, and a pill, should be taken three times a day between meals. After ten days he recommends that the dose should be diminished, one powder and one pill being taken morning and evening. He prefers this cure to that made with quinine, because, he says, it acts more rapidly, and has the advantage of improving the acoustic conditions, and of causing the vertigo and the recurrent symptoms to disappear from the first day of the cure.

V. Grazi.

Lange (Copenhagen).—*Can the Microphone be Used with Advantage in the Construction of an Apparatus for Improving the Hearing?* "Deut. Med. Woch.," April 14, 1892.

THE author considers that the principle of the microphone cannot be employed for this purpose. No microphone is in the strict sense portable. The instrument is a transmitter not an intensifier of sound. He constructed a microphone that was not affected by movement, and fitted with a pocket battery. For people with normal hearing it answered well, but for the deaf it was quite useless.

Dundas Grant.

Jankau, L. (Zurich).—*A New Method for the Differential Diagnosis of Labyrinth and Middle Ear Disease.* "Deutsche Med. Woch." March 10, 1892.

TWO otoscopes (diagnostic tubes) are inserted into the patient's and the observer's ears. A vibrating tuning-fork is placed on the patient's head.

If the fork is better heard (by the observer) through the tube connected with the patient's *worse* ear, the affection is tympanic ; if better through the one connected with the *better* ear, labyrinthine. *Dundas Grant.*

Krzywicki, Dr. von (Berlin).—*Contribution to the Question of the Value of the Tuning-Fork in Differential Diagnosis.* "Berl. Klin. Woch.," March 21, 1892.

A MAN, aged forty-two, who had never complained about his hearing, received a blow on the left parietal region, which appeared to occasion considerable cerebral concussion, brief unconsciousness, vomiting, slowing of pulse, aphasia, and right-sided deafness. There was opacity and slight indrawing of the right membrane, and a plug of wax in the left meatus. The tuning-fork on the skull was heard in the right ear only, and Rinne's experiment showed, on the right side, complete insensibility for bone and air-conduction. [We cannot reconcile the *fact* of complete insensibility to bone-conduction on the right side with the previous *fact* of the tuning-fork on the skull being heard in the right ear only. This, along with absence of hearing by air-conduction, is surely a negative Rinne.—ED.] Apart from the tuning-fork evidence the physician would readily have diagnosed the condition as the result of laceration of the auditory cortical centre (for the right ear) in the left temporo-sphenoidal lobe. The tuning-fork ought then to have been heard in the left ear, and not in the right, for two reasons—the ceruminous plug and the affection of the right-side centre—but it was not.

The author finds great difficulty in explaining this, but allows that he had objective evidence of chronic catarrh of the right ear. [Might it not be possible that the deafness in the right ear had long existed, but was unnoticed till the blow led to the sudden impaction of the cerumen in the left ear, whereupon complete bilateral deafness came on, and the right-side affection was attributed to the injury?—ED.] *Dundas Grant.*

Scheibe, Arno (Munich).—*A Case of Deaf-Mutism with Auditory Atrophy, and Anomalies of Development in the Membranous Labyrinth of both Ears.* "Arch. of Otol.," Jan., 1892.

A DEAF-MUTE, aged forty-seven, died of phthisis. The innermost convolution at the base of both temporal lobes showed some cystoid degeneration. The auditory nerves showed no sign of atrophy. There were a few fibrous bands between the incus and membrane, and round the stapes, but the ossicles were quite mobile. Considerable losses of nerve-fibres were observed in the convolutions of the cochlea. Reissner's membrane was much bulged into the scala vestibuli, and was at its outer extremity attached, not to the stria vascularis, but at the upper extremity of the ligamentum spirale. Corti's membrane was in its "rolled-up" embryonal condition. Among other abnormalities was atrophy of Corti's organ in which hyaloid bodies were present. In the vestibule and ampullæ there was less complete atrophy of the nerves. There was a large amount of pigment in the labyrinth. The atrophy was chiefly confined to the nerves of the cochlea, sacculus, and posterior ampulla, viz., the branches of the posterior ramus of the auditory nerve. There seems an absence of the signs of old inflammation which are so usually found in cases of deaf-mutism. *Dundas Grant.*

Moos, Prof. S. (Heidelberg).—*Further Examinations of the Labyrinths of Six Petrous Bones from Children who had died of Diphtheria.* "Arch. of Otol.," Jan., 1892.

MICROCOCCHI and streptococci were freely distributed. There were thromboses in small veins and arteries similar to those found in animals subjected to the subcutaneous injection of staphylococcus pyogenes. Invasion of micrococci produced corrosion of the periosteum and necrosis of the osseous capsule most frequently in the semi-circular canals and ampullæ, less so in the aqueductus vestibuli. The marrow cavities were also invaded, and colloid degeneration sometimes produced. Coagulation necrosis occurred in the labyrinthine ligaments, the membranous semi-circular canals collapsed, accumulations of lymphoid cells, and commencing ossification were observed in the vestibular peri- and endolymphatic spaces. The nerves suffered through hæmorrhages and through direct mycotic degeneration, and the structures in the cochlear duct were altered through hæmorrhage and coagulation necrosis. It was notable that there was no tendency to reactive inflammation—suppuration.

Dundas Grant.

Herroun, E. F., and Yeo, Gerald.—*On the Audibility of Single Sound Waves, and the Number of Vibrations necessary to Produce a Tone.* "Proceedings of Royal Society," Jan. 21, 1892.

THE lowest number given by Helmholtz as capable of producing a tone is forty-one, and the authors accept that, but they hold that a lower number of vibrations are *audible*, founding on experiments made with tuning-forks and a phonautograph. To obtain single vibrations of very short duration (equivalent to the individual vibrations producing very high notes) a disc siren was used. Single puffs of a duration of as little as one-thousandth of a second were distinctly audible, producing when isolated a dull, monotonous sound. They conclude that each individual wave of the series causing a tone stimulates the terminals of the auditory nerve.

Dundas Grant.

Rossi, Prof. E. de.—*Inaugural Address at the Opening of the Twentieth Session of Instruction in Otology in the Royal University of Rome.* "Boll. delle Mal. dell' Orecchio, della Gola e del Naso," Jan., 1892.

IX opening formally the new premises in the department of Otology in the Hospital, he said :—

"You will do well, gentlemen, to endeavour to demonstrate the connection between otology and general medicine."

He began by saying that it was the study of political economy which first suggested to Milne Edwards the idea of a *physiological division of labour*. This principle, revealed by the study of industries, is applicable to the whole field of biology, and to its several branches. Applying the conception of the natural evolution of the intellect to the evolution of medicine, it appears evident that only then will the latter be complete when the physician shall have made each one of its branches an object of careful study, and shall treat as a whole the structure, functions, and diseases of each separate organ.

The lecturer then passed in review the progressive development of

medical instruction, showing how its field is enlarging, and how the study of otology should take a leading position in it.

He then commented upon the causes which had prevented, until quite recently, the creation of new branches of study, and spoke specially of the hostility shown towards otology. He proceeded to confute the contention that the sphere of otology was a restricted one, and that the results of treatment in diseases of the ear were less successful than in other organs. He then proceeded to sketch the rise and development of the various *cliniques* in otology which have been established in different scientific centres in Europe and America. He then spoke of the frequency of ear disease, saying that in his *clinique* he treated on an average six hundred cases annually, of whom about one-third were children below nine years of age. He then touched on the serious consequences which might follow neglect of treatment in ear disease, and mentioned the progress made of recent years in the medical and surgical treatment of ear cases. The lecturer finished by insisting on the importance of specialism in the science of medicine, and upon the vitality which such a method confers on medicine as a whole. *V. Grassi.*

ASSOCIATION MEETINGS.

THIRD LIVLANDIC AERZTETAG.

Meeting, Sept. 10, 1891.

VOSS. *On Adenoid Vegetations.* Nothing new.

Michael.

GESELLSCHAFT DER AERZTE IN BUDAPEST.

Meetings, Feb. 27 and March 3, 1892.

CONTINUATION OF THE DISCUSSION ON DIPHTHERIA.

HÖGYES believed that there are different forms of diphtheria, and that therefore the effects of the medicaments cannot be compared.

SZALARDY said that the mortality of the disease has diminished, as statistics prove. He treats it by sublimate.

MARCEL GLASER referred to a patent medicine, consisting of kali-chloride of iron and mercury, by which he has obtained good results.

ZURLINGER recommended brushing with sublimate with a soft brush.

FLESH treats with cyanide of mercury internally; locally with chloroform water.

Prof. ARPAD BOKAI referred to a patent medicine called "anti-diphtheriticon," consisting of oleum cadini and other different medicaments; it is dangerous, and of no use.

Prof. JOHANN BOKAY made some concluding remarks.

Dr. TIGERMANN proposed that a permanent committee should be instituted to inquire into the different methods for treatment of diphtheria. *Michael.*

VEREIN ST. PETERSBURGER AERZTE.

Meeting, Nov. 26, 1891.

DISCUSSION ON DIPHTHERIA.

MASING gave the history of the disease. Loeffler's discovery of the bacillus was the first real progress in our knowledge for two thousand years. Strübing's paper proved that the diphtheria scarlatinosa is not true diphtheria, and is produced by streptococci. Here the bacilli are not found. He recommends brushing with carbolic acid and tincture of iodine.

LUNIN gave the therapeutic results, which he has obtained in the different treatments, very extensively. There are no great advantages in the methods which he applied.

MOSSIN reported his experiences with different methods of treatment, and concludes that the treatment with carbolic acid has its advantages and disadvantages.

SERKS also applies Masing's methods, but does not believe that their therapeutic effects are so certain as the author believes. *Michael.*

YORK ACADEMY OF MEDICINE.

Meeting, Feb. 11, 1892.

Discussion on Diphtheria.—Report in "The American Practitioner and News," March 12, 1892.

DR. WINTERS read a paper on *The Best Apparatus and Best Disinfectant for Use in the Mouth and Nose*. He advocates irrigation through the nose with a ten per cent. solution of peroxide of hydrogen by means of a Davidson's syringe. One pint of solution ought to be used at each washing. The inhalation of sulphurous acid gas, and of steam medicated by adding one ounce of spirits of turpentine and two drachms of oil of eucalyptus to a pint of water, are also advocated.

Dr. CHAPIN read a paper on *Quarantine and Disinfection in Limited Apartments*. Sunlight and air are rightly insisted on as the two most powerful disinfectants at our command.

Dr. HOLT spoke of *Feeding in Diphtheria, and Methods of Forced Feeding*. Milk, good broth, gruel, and wine whey are to be relied on. Stimulants and predigested food may be given at intervals of less than two hours' duration, but about two hours may be regarded as a suitable time to elapse between meals. Forced feeding is best carried out by means of a stomach tube passed through the mouth or nose, and peptonized milk is the best food. The operation should be repeated once in four hours.

Dr. JACOBI spoke upon *The Constitutional Treatment in Diphtheria*. He gives perchloride of mercury in large doses, *e.g.*, a child of six months old will take a quarter of a grain a day. Alcohol, digitalis, and camphor, by stomach or hypodermically, are recommended.

Dr. SEIBERT demonstrated his method of sub-membranous antiseptic injection.
B. J. Baron.

NEW YORK ACADEMY OF MEDICINE.

Meeting February 18, 1892. ("Medical Record," March 12, 1892.)

CHAPPELL, W. F. (New York). *Superior Maxillary Neoplasm removed by Rouge's Operation.*

A child, after a fall, had pain on the right side of the nose. Two weeks later a small swelling appeared. The lower lip was a little puffed, the nose bled at intervals, and after a month Dr. Chappell found a tumour of the size of a hickory nut. It seemed to be continuous with the nasal bone, but really grew from the superior maxilla. It was a hard, bony mass of cancerous matter, and had since recurred in an extensive form.

ASCH, MORRIS. *A New Snare.*

No particulars except the statement of the possibility of enlarging and diminishing the loop while *in situ*.

PHILLIPS, WENDELL C. *Case of so-called Laryngeal Vertigo or Laryngeal Epilepsy.*

A typical case in a strong, middle-aged man subject to winter bronchial catarrh. One day, during a paroxysm of coughing, he suddenly fell on his back, and remained unconscious for a few seconds. Following this he had an attack almost every day—sometimes in bed. Examination of the air-passages revealed a generally hyperæmic condition. There was polypoid degeneration of the middle turbinated bones, and an exostosis of the septum. No signs of paralysis of the vocal cords. He was excitable, and had suffered severe mental strain from business worry. After ten days he completely recovered. The treatment was dietetic, a cathartic, bromide of sodium and five minim capsules of eucalyptus.

Dr. PHILLIPS objected to the use of the names "vertigo" and "epilepsy," and considered the term "laryngeal syncope" more appropriate.

Dr. DELAVAN favoured the term "laryngeal crisis."

Dr. FISCHER said a similar condition was met with in locomotor ataxia. He thought it was of cerebral origin—perhaps some affection of the laryngeal cortical centres.

Dr. ARMSTRONG considered it due to irritation of the vagus.

Dr. NEWCOMB related another case which yielded to local treatment of the throat.

STIMSON, C. W.—*Case of Stenosis of the Larynx following Fracture. Treated by Intubation.*

The patient had struck his throat on a projecting screw while falling. Suffocation impended, and laryngotomy was performed. The lumen of the larynx was much narrowed, chiefly owing to the distortion of the alæ of the thyroid cartilage. A small tube was introduced on January 24th, 1890,

and when it was coughed out next day the insertion of a large one was effected. [Removal was not reported.]

ASCH, MORRIS J.—*On Hypertrophy of the Tonsils.*

The author enumerated as symptoms of hypertrophy of the tonsils, the mouth half open, the nostrils dilated, evidence of stupidity, snoring at night, tendency to otitis, quinsy and disorders of deglutition. He considers excision a dangerous operation. He would not operate simply because a tonsil was large, but would operate if it interfered with respiration, or caused frequent attacks of quinsy, or interfered with audition. He preferred Mackenzie's form of guillotine.

Dr. F. H. BOSWORTH attributed the symptoms described by Dr. Asch to enlargement of the pharyngeal tonsil. He considered an enlarged tonsil a disease, and as soon as a so-called enlarged tonsil caused symptoms he would remove it. He preferred the French tonsillotome to Mackenzie's, and objected to electro-puncture.

Dr. B. DELAVAN agreed in the main with Dr. Bosworth.

Dr. O. B. DOUGLAS thought some enlarged tonsils were simply congested, and he applied astringents and removed outside causes—such as nasal disease—before resorting to excision.

Dr. BEVERLEY ROBINSON did not think that all enlarged tonsils ought to come out. He thought that the result could be effected by galvanopuncture in about half a dozen sittings.

Dr. KNIGHT stated the four conditions in which he would resort to galvano-puncture instead of excision: (1) where one could distinctly recognize vascular anomaly; (2) where the tonsil was deeply buried, flat, diffuse, perhaps adherent with the pillars, and could not be included readily in the tonsillotome; (3) in hæmophilia; (4) where the patient absolutely refused to be cut.

Dr. JACOBI attributed the stupidity referred to by other speakers to the connection between the glands in the pharynx and those within the cranium rather than to interference with respiration.

Dr. AGRAMONTE opposed wholesale tonsillotomy. He said one should always be prepared to meet hæmorrhage; have the cautery and other agents convenient. Before operating, feel for pulsation in the tonsil with the finger.

Dundas Grant.

GESELLSCHAFT DER AERZTE DES CANTON ZURICH.

Meeting, Nov. 17, 1892.

SUCHANNEK. *Contribution to Rhino-Pathology.*

(1) *Fibroma pendulum Septi Narium.* Extirpation of a tumour of the size of a cherry in a patient twenty-eight years old.

(2) *Bilateral Congenital Osseous Choanal Stenosis.* A patient, eleven years old, could not respire by the nose since birth. The mouth was always open; he could not smell, and had nasal speech. By digital exploration the choanæ and the septum could be felt, but by rhinoscopy a diaphragm was seen on both sides. The diaphragms were perforated by a trocar, and the patient advised to use metal bougies every day to keep them open.

(3) The author showed microscopic specimens of true erectile tissue of the septum narium, a trephining of the antrum of Highmore, microscopic specimens of nasal epithelium, and of ozæna.

ANDELFINGEN showed an inhaler.

Michael.

REVIEWS.

Bing, Albert (Privatdocent für Ohrenheilkunde an der Wiener-Universität).—*“Vorlesungen über Ohrenheilkunde.”* Mit 27 Holzschnitten und einer Doppeltafel. (*“Lectures on Otology,”* by Dr. ALBERT BING, Teacher of Otology, recognized by the University of Vienna. With 27 woodcuts and two plates.)

THIS is a conscientious endeavour to write “a short book on otology” which shall contain all that is of practical importance (“das praktisch Wichtige”) on the subject. In this the author has been unquestionably successful. At the same time this is to some extent achieved by the omission of the chapters on the anatomy and physiology of the ear, with which it is customary to commence all systematic works on otology. To some this will be an advantage, but to the many, whose academic anatomy and physiology have lost their freshness, a decided defect. We must, however, admit that the practical reader, whose time is of value, is very apt to skip such chapters, and hurry on to those in which clinical descriptions are given, and in the work before us there is no lack of anatomical and physiological detail whenever it is necessary for the proper understanding of the clinical features of any disease under consideration. Methods of examination come first, and in the chapters devoted to them the student will find those details enlarged upon which only a thoroughly experienced and practical teacher could appreciate, as far outweighing all considerations of economy in space or printing. The author professes to attach little value to the usual drawings of otoscopic appearances, and, in truth, in presence of his magnificent word-pictures it is difficult to refuse him our acquiescence. Nevertheless, the student is always thankful for the impression produced by a well-executed drawing or diagram in addition to that made by the fullest verbal explanation. Dr. Bing recommends vulcanite catheters in preference to those made of silver. We consider his description of Eustachian catheterization as the best and truest we have read, and is, we believe, the one chiefly employed by all experienced specialists, namely, that one in which the cushion of the inner lip of the Eustachian orifice is taken as a guide—the “round the cushion” (*Wulstumgehungs*) method. The other recognized methods are also given for use in cases where that cushion is feebly marked. When auscultation leaves us in doubt as to the position of the catheter he advises posterior rhinoscopy as a means of verification. The classical Valsalva’s and Toynbee’s experiments are shortly, but very clearly, described. He rightly deprecates the habitual use of Valsalva’s method of inflation, and dwells on the preponderating advantages of Politzeriza-

tion. The objections to the latter process are also noticed, and the merits of alternative methods discussed.

It would be impossible to analyse the entire contents of this work, and we cannot probably do better than set forth the writer's opinions on some of the most important points under discussion by otologists, such as the pathology of the progressive deafness ascribed to sclerosis of the middle ear, the value of the tuning-fork in diagnosis, and the indications for the opening of the mastoid antrum.

The separation of sclerotic middle ear inflammation from chronic catarrh, properly so-called, is, according to Bing (following Von Trötsch), the outcome of "clinical necessity," and on this account, rather than from the difference in the morbid anatomy, it has to be described as a "*morbus sui generis*." In chronic catarrh the mucous membrane of the middle ear is thickened chiefly from epithelial proliferation, growth of connective tissue, and increased vascularity. These changes bring about abnormal thickenings and adhesions about the mucous membrane, coating the ligaments and articulations. Increased secretion of mucus or accumulation of serous exudation is usually only found as the result of subacute exacerbations.

In sclerosis the mucous membrane becomes denser, more rigid, and more inelastic, and this change affecting the *membrana tympani*, the malleo-incudal articulation and the two fenestræ, interferes seriously with the vibratory capacity of the tympanic mechanism, leading ultimately, as it does, to complete rigidity of the ossicular joints, to calcification or ossification of the annular ligament of the stapes (*synostosis stapedis*), or of the fenestra rotunda. The former disease is usually accompanied by evidence of the naso-pharyngeal disease from which it arises. The latter may have no such associations—it is often hereditary; a predisposition to it may be aroused by injudicious cold-water cures, sea-bathing, frequent pregnancies, with hæmorrhage—also, according to Bing's experience, barrenness—*anæmia*, *plethora*, general disposition to dryness of mucous membranes and skin. "*But the exact cause of this disease is up to the present unknown, and it remains for the future to clear it up.*" The clinical descriptions of the two diseases bring out admirably the points of resemblance and difference.

In testing with the tuning-fork, the writer makes a discriminating use of the various classical experiments. The "positive" result of Weber's test is accepted as evidence of an interference with conduction—affection of the conducting apparatus—but does not prove integrity of the labyrinth, as the latter within certain limits may be "over corrected" by the former. On the other hand, the "negative" result by itself proves as little against the presence of obstructive disease as it does in favour of a labyrinthine affection on the side of the worse hearing ear. In fact, he finds in Weber's test one of the earliest signs of sclerotic middle ear catarrh. "Negative" Rinne is considered by Bing sufficient proof of obstructive disease, but the presence of—bone and air—conduction, along with "positive" Rinne, is not by any means incompatible with an affection of either conducting or perceiving apparatus. The loss of hearing for the tick of a watch in contact with the skull may indicate nerve deafness

before the tuning-fork points to it, and Weber's test may discover middle ear catarrh, while Rinne's experiment gives still the normal "positive" result. The author insists that a margin must be allowed for physiological variations, and that only to *maxima* and *minima* must diagnostic value be attributed. He discards Gellé's experiment on the strength of Politzer's opinion as to its unreliability. When in the course of dry middle ear catarrh (sclerosis) there comes on diminution of bone-conduction, he considers this diagnostic of involvement of the labyrinth.

Concerning the operation of opening the mastoid, we are bound to say that the otherwise satisfactory work is a little disappointing. Some writers treat the question too much in a "cut and dry" way. Dr. Bing here errs in the other direction. We gather that he does not operate early, and has great belief in the preventibility of mastoid inflammation in acute otitis by the application of cold "from the beginning of the middle-ear inflammation till its acme has been passed." When the complication has occurred, he applies Leiter's cold coil or wet compresses, paints the mastoid with iodine (tinct. iod., tinct. gallarum aa 5, tinct. opii. 1), then when the dry skin scales off rubs in an iodine ointment (pot. iod. 2, iod. pur. .05, unguent. emoll., lanolin aa 5), and keeps up Eustachian inflation. This treatment carried out for a few days has, he insists, frequently brought about recovery in cases in which opening the cells appeared imminently called for. As a complication of chronic suppuration, mastoid antral disease does not appear to the author to call for urgent operation, unless a long-continued simple treatment has been without result, or the meatus is narrow or a rigor has occurred. For the full consideration of the more serious cerebral and other complications, he refers to works on "innere medicin."

The book is written in lecture form, and the mode of statement gives the idea throughout that the writer believes what he says. Although avowedly founded to a large extent on the teaching of Gruber and Politzer, its facts and arguments are put in a sufficiently original way to make it a valuable addition to the works of these great authors, while to many it will be welcome as conveying concisely the most of the practically important information which these works contain. A good translation would, we are sure, find a ready sale. *Dundas Grant.*

Tavel (Bern).—*Ueber die Ätiologie der Strumitis. Ein Beitrag zur Lehre von den Hæmatogenen Infectionen.* ("Etiology of Goitre. Contribution to the Knowledge of Hæmatogenic Infections.") 193 pp. With 15 woodcuts and 8 temperature curves. Basel: Carl Sallmann, 1892.

A MONOGRAPH in the best sense of the word, beginning with an enumeration of 177 publications on the subject. "Strumitis" he defends as an infectious inflammation of the goitrous thyroid gland. Inflammation of the normal gland he calls thyroiditis. Of the published cases he refers particularly to some caused by typhus, cholera, dysentery, pneumonia, ague, rheumatism, pyæmia, puerperal fever, parotitis, malaria, influenza, scarlatina, measles, diphtheria, erysipelas, tuberculosis (one case of primary tuberculosis of the gland), syphilis, injury. He describes eighteen cases observed by himself and examined bacteriologically. All the

organisms found were carefully recorded. He has studied the nature of the forms according to Koch's methods, and describes their appearance, cultivation, and effects when introduced into animals. He concludes: firstly, inflammation of the thyroid gland is of hæmatogenic origin; secondly, in exceptional cases, primary; thirdly, in some cases a primary infection is found, and the disease may be looked upon as metastatic; fourthly, it may be a single or mixed affection. The author concludes with reference to the differential diagnosis and therapeutics. *Michael.*

Klebs (Zurich).—*Die Behandlung der Tuberkulose mit Tuberkulin in Hamburg und Leipzig.* Leopold Voss, 1892, 39 pp.

THE author has treated Koch's tuberculin with platinum chloride; believes that he has removed the dangerous materials from this agent, and that a good preparation for the treatment of tuberculosis is the result. Experiments have been made upon animals. He has treated something like 100 cases; 75 of them have already been reported, with the result that 18 per cent. he says are cured; 60 per cent. improved. In the remainder no improvement was obtained. Necrosis of the tissue does not result, as in the cases of Koch. *Michael.*

Hennig, C. R. (Posen).—*Die Unterscheidung der Gesangsregister auf Physiologischer Grundlage, mit besonderer Berücksichtigung der Voix mixte.* ("The Distinction of the Singing Registers on a Physiological Base, with Special Relation to the Voix Mixte.") 23 pp. Leipzig: Verlag von Gebrüder Hug, 1891.

AFTER describing the physiology of the respiratory organs, the author records his own views concerning the singing registers. He approves of the theory that every register has a special muscle to perform a particular function. *Michael.*

Rose, William.—*On Harelip and Cleft Palate.* Lewis, London.

PROFESSOR ROSE offers us under the above title a well-digested account of his own and other authors' views on this subject. The work is affectionately dedicated to the memory of his master, Sir William Fergusson, to whose inspiration he gratefully acknowledges his indebtedness.

The book is interesting from the beginning of the first chapter, the author being evidently inclined to look well round his subject. Thus he refers to Bland Sutton's observations on the occurrence of the deformity in the lower animals, and notes the significant decrease in the frequency of its occurrence in lion cubs after the practice was adopted of giving the lions such food that they could eat both flesh and bone. Association with other deformities of the mouth and ear, club-foot, hypospadias, congenital defects of heart and smallness of head, etc., come in for notice, and, among others, Sir Morell Mackenzie's case, in which, in conjunction with harelip and cleft palate, there was a congenital fissure between the arytenoid cartilages with a trilobate epiglottis. The influence of heredity is accepted, and "maternal shock" and "maternal impression" are duly discussed before being set aside. We need hardly say they are disposed of by chronological considerations.

The development of the parts is treated of by Mr. Carless. The occurrence of the rare median harelip is explained by the non-coalescence

of the globular processes of the fronto-nasal plate. The occasional "recurrence to type" in the shape of a third, accessory, incisor is adverted to.

Among interesting practical points may be mentioned a nipple-shield with artificial palate, devised by Oakley Coles, to enable infants with cleft palate to have the benefit of breast-milk. The age at which harelip should be operated on is between four weeks and three months—preferably at six weeks—subject to variations according to circumstances, which are fully discussed. In operating, the detachment of the lip and ala nasi to the maxillæ and alveoli is strongly insisted on. Respiratory difficulty after operation may be relieved by the holding down of the lower lip with the forefinger, or by the application of a longitudinal strip of collodion, extending down to the chin. The removal of the os incisivum in double harelip is recommended in preference to its reposition.

As regards cleft palate, Professor Rose postpones operation till the child is at least three years old. He does not always operate on hard and soft palate at one sitting, doing *the hard palate first*, and only proceeding to the union of the soft if, after the loosening of the muco-periosteal flaps, the other parts come easily together. He considers chloroform administered on the corner of a well-starched towel (without nasal or buccal tubes) the best anæsthetic. He emphasizes certain rules derived from a paper on the subject by Mr. Cheatle, including the following: When the conjunctival reflex is absent, the pupil contracted, and the colour good, the patient is in the best condition of anæsthesia. He prefers a unilateral gag, such as Mason's, as modified by himself. Like Mr. Thomas Smith, he objects to needles which make linear holes parallel to the cleft, and adopts those of the Hagedorn type. He uses sutures of well-annealed silver wire of 30 or 32 gauge, except in the neighbourhood of the uvula, where catgut or silk is preferable, and makes use of the old "loop method" instead of a hollow palate needle. In case of gaps being left as the result of defective union, he waits for the contracting tendency of cicatrization to reach its utmost extent before proceeding to a second operation. In spite of all that dentists claim for obturators, the author holds that in the majority of cases operative interference, followed by a suitable educational course, gives incomparably superior results. The indications for the use of obturators are given on p. 145.

This work is already probably in the hands of every operator on the palate. Its well-digested contents are redolent of practical experience, and will be found most readable.

Dundas Grant.

Rosenthal, Carl (Berlin).—*Die Erkrankungen der Nase, deren Nebenhöhlen, des Nasenrachenraums und des Kehlkopfs.* I. Band. *Die Erkrankungen der Nase, deren Nebenhöhlen und des Nasenrachenraums. Ein Kurgefasstes Lehrbuch für Aerzte und Studirende.* ("The Diseases of the Nose, Naso-Pharynx, Accessory Sinuses, and Larynx." Vol. I. "The Diseases of the Nose, the Naso-Pharynx, and the Accessory Sinuses." A short Handbook for Physicians and Students. 297 pp. With 41 woodcuts in the text. Berlin: Hirschwald, 1892.

IN spite of the fact that some good handbooks have been published, this one will hold its own. The author first treats of the things necessary to

the practical surgeon in the physiology and pathology of the nose. There is a review of literature, especially German literature. Some of his views may be questioned, particularly the medications recommended in acute diseases, also the nasal douche in children. He treats of gangrenous rhinitis specially, as being produced by foreign bodies and infectious diseases.

Michael.

Davis.—*Guide to the Administration of Anæsthetics.* By Henry Davis, M.R.C.S. Second Edition. London: H. K. Lewis, 1892, 92 pp.

THE author of this little book is teacher and administrator of anæsthetics at St. Mary's and the Dental Hospitals in London, and he has endeavoured "to supply in a compact form the chief details which are requisite for the "safe administration of the various anæsthetics now in use." In the short space of ninety pages a fair amount of practical information is compressed, and the book is a trustworthy guide to the subject, and one which may safely be recommended to the student. It is interesting to note that the author's experience leads him to prefer ether as a safer anæsthetic than chloroform in all persons between the ages of six and sixty, unless there are special indications for the use of the latter anæsthetic.

R. Norris Wolfenden.

Buret.—*Syphilis in Ancient and Prehistoric Times.* By Dr. F. Buret. Translated from the French by Dr. A. H. Ohmann-Dumesnil. Vol. I. F. A. Davis, Publisher, 1891, 226 pp.

THIS is a most learned, interesting, and instructive book, and the portion which deals with the historical consideration of the disease in ancient times must have cost the author an infinite degree of labour. Chapters deal with the occurrence of the disease in prehistoric times, among the Chinese five thousand years ago, in Japan at the beginning of the ninth century, amongst the Egyptians in the time of the Pharaohs, among the ancient Assyrians and Babylonians, among the Hebrews in Biblical times, among the Hindoos a thousand years before the Christian era, and among the Greeks and Romans. An immense amount of classical research is brought under notice, and an English translation such as this is most acceptable. Moreover, this translation appears to have been very well made.

R. Norris Wolfenden.

Middeldorpf (Hanau) and Goldmann (Freiburg).—*Experimentelle und Pathologisch-Anatomische Untersuchungen ueber Croup und Diphtherie.* ("Experimental and Pathologico-Anatomical Researches on Croup and Diphtheria.") 44 pp., with one table in lithography. Jena: Gustav Fischer, 1891.

VERY careful anatomical and experimental researches, under the guidance of Prof. Weigert in Frankfort-on-Maine, which gave the following results:—In experimental croup (produced by submucous injections of ammoniac in the mucous membrane of the respiratory passages of animals) and in true diphtheria (the organs of a man, twenty-one years of age, who died in four days of this disease), the prevalent part of the pseudo-membrane is fibrinous, arising from the inflamed and altered vessels of the mucous membrane. The formation of the pseudo-membrane follows the complete destruction and elimination of the epithelium. The hyaline is no

special substance, which arises by specific necrosis of the protoplasm of the cells, but a derivation of the fibrinum. A true pseudo-membrane is never found on a mucous membrane covered with epithelium; therefore we must conclude that croupous and diphtheritic pseudo-membranes are homologous in histology and origin. The existence of fibrine alone in both pseudo-membranes would be sufficient to prove the inflammatory origin of both affections; but the examination of the mucous membranes in experimental croup and epidermic diphtheria have shown the inflammatory nature. The authors conclude that from the anatomical standard croup and diphtheria are identical. *Michael.*

Massei, F. (Neapel).—*Pathologie und Therapie des Rachens, der Nasenhöhlen und des Kehlkopfs.* "Nach der zweiten Auflage ins Deutsche übertragen, von Dr. Emanuel Fink in Hamburg." Erster Band, Rachen und Nasenhöhlen. 2^e Lieferung. 130 pp. Leipzig: Arthur Felix.

SECOND part of the first volume of the well-made German translation of Massei's handbook, *Michael.*

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A CASE OF LARYNGECTOMY.

By Dr. J. SOLIS-COHEN. (*Reported stenographically by Dr. MORRISON.*)

At a meeting of the Philadelphia County Medical Society held May 25th, 1892, Dr. J. Solis-Cohen exhibited a patient from whom the larynx and upper ring of the trachea had been removed for malignant growth projecting externally; and made the following remarks:—

Nineteen years ago this patient, a teamster, then twenty-five years of age, found that he was having some hoarseness of voice, which soon became associated with dyspnœa. This dyspnœa increased in the course of three years to such an extent that he was hardly able to breathe. He then came under the care of Dr. Lefferts, of New York, who found a large papilloma in the larynx, which growth he removed piece-meal by intra-laryngeal procedures. Dr. Lefferts reported the case in the "New York Medical Record" in 1876, and I pass around a copy, showing a picture of the growth at that time. For ten years the man remained in continuous comfort. Then recurrence of his former troubles ensued, and he had more or less difficulty for several years, and underwent various treatments. About a year or so ago he began to be much worse, and in January he applied for relief at the dispensary of the Jefferson Medical College. At that time he was suffering with great dyspnœa, a good deal of pain, cough, difficulty of expectoration and difficulty in swallowing. The picture of his larynx was almost exactly a reproduction of the picture that I have passed around, and which was taken in 1876, that is, sixteen years ago, but with this exception; the growth which occupied a large portion of the left side of the larynx, almost occluding it, was white

instead of red, and had not the characteristic papillomatous appearance. The growth had penetrated the larynx exteriorly, and projected externally in a mass larger than an almond.

The history of the case led me to believe it to be a re-development of papilloma *in situ*, and not a recurrence. The dyspnoea was very great, and I made an appointment to perform tracheotomy, promptly ; but being suddenly attacked with influenza, Prof. Forbes performed the operation for me at his own clinic, and inserted a tube. This precautionary tracheotomy was performed because I did not consider it safe to attempt a removal of the growth with forceps until we had provided a safety-valve below by means of the artificial orifice. Three or four weeks later I attempted to remove the growth by intra-laryngeal procedures. It was easy to catch hold of it with large forceps, and I removed a very curious structure which looked as much like a piece of codfish skin as anything else. After examining it I came to the conclusion that the forceps had grasped the tumour, but, unable to remove it, had peeled off the thickened epithelium. This was given to a microscopist to examine, and was reported to be a sarcoma. Finding that we could not remove the growth with forceps, we took the patient before the class, where, with the assistance of Dr. Forbes, I excised the external growth and then split the larynx, and removed every portion of the internal growth, scraping the parts thoroughly afterwards. The case did well for four weeks, when recurrence took place, and in less than two weeks the growth became almost as large as at the time of the original operation, grew more and more rapidly, and again protruded through the necrosed thyroid cartilages.

After explaining to the patient the dangers connected with a radical procedure for extirpation, and after consultation with the surgical members of the Faculty, I decided to excise the larynx. This operation was performed on Friday, April 1st, with the assistance of Prof. Keen and of Dr. O. Horwitz, chief of the surgical clinic.

The day before the operation I had the opportunity, through the courtesy of Prof. Forbes, to perform the operation on an uninjected subject. Dr. Forbes at that time made a suggestion which was carried out in the operation, and the excellent result of which you will see presently. This suggestion was, that after the larynx was removed, the anterior portion of the trachea should be split longitudinally for two or three rings, and that the lips so formed be stitched to the skin anteriorly, so as to present forward and keep the trachea in a favourable position.

There was a good deal of difficulty in the operation, owing to the cicatricial tissues and other changes of structure and relations of parts which had resulted from the previous operations. I was, therefore, unable to tie the laryngeal arteries before the extirpation, as I had proposed to do, but Drs. Keen and Horwitz looked after the bleeding while I went ahead with the excision. The incision was made everywhere through healthy structure. The diseased skin and enclosed morbid mass was circumscribed by elliptic incisions in sound skin joining a vertical incision from the hyoid bone above and region of the tracheal canula below, and then a transverse incision was made at the level of

the hyoid bone so as to make a T incision and two lateral flaps. The incision was carried down to the periosteum, and the soft parts were then separated with Allis's dry dissector, which answered admirably. During this time anæsthesia was carried on by chloroform through the tube by means of a funnel and an india-rubber tube. When the larynx had been separated from the soft tissues, and I could get my fingers around it, I removed the ordinary canula and inserted a tampon canula to prevent, as much as possible, any entrance of blood into the air passages. For this purpose I used the Von Trendelenburg canula, but not the Trendelenburg system. Trendelenburg uses a rubber bag inflated with air. Air or water bags are very often opened by puncture during the operation. An hour or two before the operation I had moistened a piece of ordinary surgical sponge, and secured it around the canula, and over this place had tied a bulbous india-rubber tube. I have here the canula undisturbed, and although fifty-six days have elapsed since it was prepared, you see that the tampon is still perfect, and sufficiently pliable for immediate use. The patient's head was lowered as soon as this canula was introduced, and anæsthesia was subsequently kept up through the tampon canula, which leaked a little despite all efforts to prevent it. The epiglottis being healthy, I made an incision through the hyo-epiglottic membrane and cut the epiglottis square off. The larynx was then tilted forward.

Knowing that there has been difficulty in nourishing patients after operation, I had determined to save the entire œsophagus if possible, instead of severing it at the level of the cricoid cartilage; and by careful manipulation I was able to strip the œsophagus from the mucous membrane, and the tips of the arytenoid cartilages down to the base of the first ring of the trachea, without perforating the œsophagus. The larynx, with the first ring of the trachea attached to it, was then severed from the trachea, and the trachea was stitched to the skin in two flaps, formed by the sides of the original tracheotomy incision, which had embraced the second and third rings. The tampon canula was then stitched to the integument to ensure its resistance to expulsion in coughing. The soft parts were then brought loosely together with sutures, without any dressing in the pharynx, and a soft rubber stomach tube was inserted into the stomach through an opening left in the upper portion of the dressing. This was so placed under the impression that there might be necessity to use it for introducing nourishment; but it was found unnecessary, and it did some harm. An hour had been occupied in the whole procedure—anaesthetization, operation and dressing. The patient was then put to bed. He was carefully watched. I stayed with him for sixteen hours, and during this time I instructed a number of young men connected with the throat and surgical clinic of the hospital, how to take charge of the case. Two members of these staffs were with him constantly for eighty hours. Twice during that time the man would have died had skilled hands not been present to remove mucus from the tracheal tube. The advantage of having the canula stitched to the skin was well demonstrated upon these occasions. It is to the close attention of these young men for the first eighty hours, and to the admirable services

of our chief surgical resident, Dr. Hager, that this man chiefly owes his life, for the attention after such an operation is far more important, in a clinical point of view, than the operation itself, all-important as it is. There was a good deal of oozing alongside of the œsophageal tube. On the third night this tube became detached, and we did not reintroduce it. Nutritive enemata were used for four or five days, and then we gradually began to feed the patient by the mouth. At each attempt at swallowing, a piece of gauze was held tight above the tracheal wound, and the parts pressed close together while the patient swallowed. There was a little trickling for a few days, but this ceased. It was interesting to watch the œsophagus during swallowing, before the external wound contracted. It was easy to see that the œsophagus opened when the man took water. There has been some doubt whether there is a mechanical distension of the mouth of the œsophagus in glutition, or whether there is some dilatory action of the œsophagus itself. In this case the œsophagus certainly did open, to receive the water at least. The man has made an uninterrupted recovery. There has been no attempt made to use a voice tube, and for two reasons. In the first place I know of no one in this city competent to make one, and in the second place I do not wish to put anything into the wound that would irritate it until there should remain no doubt in regard to the question of non-recurrence.

You will notice in examining this patient that there is now no connection between the trachea and the nose. I wish here to call attention to an important physiological point. Of late years a number of German surgeons, Aschenbach and others, and notably MacDonald, of London, and Bosworth, of New York, have been making experiments in reference to the physiology of nasal respiration by the use of tubes, etc. They assert that the air of respiration becomes fully saturated with moisture in the nose, and that consequently, being saturated when it enters the lung, it can receive no moisture from the lung. Therefore, say they, physiologists are wrong in stating that moisture is exhaled from the lung. In this case there is no connection whatever between nose and lung; and if you take a mirror and hold it over the tracheal opening, you will see that it becomes covered with moisture. In this case the lungs do exhale moisture. Of course, here the conditions are different from normal conditions. I only wish to call attention to this point, as it seems to show that the older physiologists were right. There is still a small fistula above, which I think will close without difficulty, but it has no connection whatever with the trachea.

From the history of this case I took it for granted at first that it was a papilloma recurring upon the seat of a former growth; but when a portion of it was examined by a microscopist, it was pronounced sarcoma. After extirpation of the larynx, the growth is pronounced to be a cylindrical epithelioma or a destructive adenoma, or adeno-carcinoma, involving the arytenoid cartilages as well as the thyroid. You see it here in the specimen, nearly filling the cavity of the larynx, projecting from the left side mainly, but extending slightly to the right side, and penetrating necrotic portions of both wings of the thyroid cartilage, so as to present externally and

involve the cutaneous surface likewise. Whatever it may be, there is no doubt of its malignancy.

The question whether benign growths are ever transformed into malign ones is important. It is the generally received opinion that benign growths are sometimes, by further irritation, converted into malign tumours. Semon's investigation into this point is greatly to the contrary, as far as regards laryngeal growths. Certainly, there was in this case no conversion of a papilloma into a malignant growth. The malignant growth became developed many years later upon the site from which a benign growth had been removed.

There is one clinical point that has been a revelation to me, and that is the freedom from pain, freedom from cough, and freedom from dysphagia. Should there be no recurrence in this case, we have every reason to be satisfied with the result. Should recurrence ensue, the patient will have been relieved from suffering for some time. A number of years ago, when I investigated this subject, I was opposed to the operation in the main, as I still am. This is an exceptional case, and it is only in exceptional cases that laryngectomy should be practised. At that time, Dr. Czerny wrote to me that if I could only see some of his patients, and witness how free from pain they were, I would believe that the operation was a justifiable one. This case verifies his assertion.

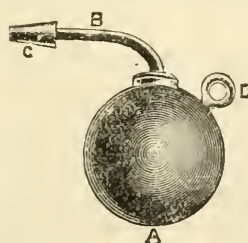
The patient is now wearing a single rectangular-like tube, with as large a calibre and as little paraphernalia about it as possible.

AURAL CATHETER STEAM STERILIZER.

By JOHN BARK, F.R.C.S.E.,

Hon. Surgeon Liverpool Throat Hospital.

THE accompanying woodcut shows, full size, a little instrument which I have used for some time for the purpose of cleansing Eustachian catheters before introduction. A is a metal globe to which is attached, by means of a screw, a bent metal tube B, which has a conical nozzle C,



covered with rubber tubing; to the globe A is fixed a small ring D. The globe A is half filled with water, and the tube B screwed tightly; the large end of the catheter is placed on the nozzle C, and the globe held over a spirit lamp or other flame by means of a pair of forceps, or even a common wooden match pushed through the ring D.

A powerful steam jet is thus forced through the catheter, thoroughly cleansing it, and then it is immersed in some antiseptic fluid.

The sterilizer is made by Messrs. CONETER & SON, of 4 & 6, Grafton Street, Gower Street, London. Too great caution cannot be exercised with regard to the purifying of aural catheters; several cases have been

reported, notably those by Burow, of syphilitic infection, which have been directly traced to catheterism, and it is easy to understand how suppurative inflammations might be communicated from patient to patient in a similar way. I trust this little apparatus may prove as useful to all aural surgeons as it has to me.

CLINICAL NOTES.

From the Clinic of Dr. NORRIS WOLFENDEN, The Throat Hospital, Golden Square, London.¹

Case I. : *Bilateral Abductor Paralysis, large Aneurism ; Tracheotomy ; subsequent Death.*

The patient, T. P., a man aged forty, a printer, first attended as an out-patient on March 22nd, 1892. On sitting in the examination chair, it was obvious that the patient was suffering considerable difficulty of breathing. The face was dusky, the expression anxious, and there was obvious stridor. In the patient's condition it was difficult to get any history of the disorder. It was elicited, however, that he had been under treatment two years previously for "chronic laryngitis." The radial pulse in the right arm was nearly absent, and a suspicion was thereby aroused of aneurism. The condition of the larynx, however, led me to its immediate examination without loss of time in questioning as to history. With some little difficulty, owing to the patient's anxiety and nervousness, and also to the fact that introduction of the mirror into the pharynx tended to produce an attack of suffocation—it was elicited that he had latterly had many attacks of suffocation lasting for half-an-hour at a time, and chiefly in the mornings on rising—a thorough examination of the larynx was made, and it was found that the epiglottis and ventricular bands were congested and a little thickened ; the latter, however, not so much as to hide the vocal cords. There was no thickening of the posterior wall of the larynx, or about the arytenoids. There was abductor paralysis of *both* vocal cords, *i.e.*, the cords lay approximated nearly in the mid line, with a narrow glottic chink, and which on attempts at phonation they approached still further ; on efforts at inspiration the right cord did not separate at all. This cord lay a little nearer the median line than its fellow. On attempts at deep inspirations both cords showed a slight movement towards the median line. While still under examination a suffocative attack came on, and the patient begged to be allowed to retire into the ante-room. The attack persisted, commencing with short inspiratory gasps accompanied with marked stridor, ending in cyanosis, failing pulse, and the patient began to lose consciousness. It was deemed advisable to at once perform tracheotomy, and this was efficiently done by the resident medical officer, Mr. Sharman. Owing to a large plexus of veins, a large amount of hæmorrhage occurred, which was with difficulty controlled by Spencer Wells forceps and ligature of the larger

¹ From Notes supplied by Dr. Sharman, Resident Medical Officer.

vessels. Cyanosis diminished, however, and consciousness returned, but it was not deemed advisable to open the trachea until the hæmorrhage was so far controlled that there was little danger of blood passing into the windpipe. The insertion of the tube was, however, followed by the sucking of some blood into the trachea, but this was at once expelled by coughing. A pad of eucalyptus gauze packed into the wound beneath the tube arrested any further bleeding. The patient rallied fairly well after the operation (which was performed at 2.45), and was carried to the ward and put to bed. A large papulo-squamous rash was then noticed about the neck, shoulders, and back, and there were patches of scarring of the skin. At half-past six the patient was breathing fairly comfortably, but had coughed a good deal of blood out of the tube. The wound was found to be practically dry, but a fresh piece of gauze was packed into it, after well dusting it with iodoform. Being restless, a hypodermic injection of one-fifth of a grain of morphia was given.

March 23rd, 10 a.m. Patient had passed a good night and was breathing fairly comfortably, but there was some rattling of mucus in the tube. Temperature was normal. The gauze was removed from the wound; this was well dusted with iodoform, and the edges were brought together by strapping. A few crepitations were discovered at the bases of both lungs, with inspiration, but auscultation was difficult owing to the conduction of sounds from the tracheotomy tube. There was no dulness. The radial pulse was almost quite absent on the right side, and patient stated that this condition had been noticed twelve months before, when he came to the hospital previously.

The urine examined was of specific gravity 1076, loaded with urates, and albumen and sugar were absent. He was ordered ten grains of iodide of potassium three times daily, with a teaspoonful of the linctus glycerini occasionally to relieve cough. During the day the patient was able to sit up in bed and to talk by closing the tube with his finger. He took fluid nourishment during the day, but complained towards evening of a little difficulty in swallowing. During the day, his wife was seen, and said that during the previous six or seven weeks the patient had had many severe suffocative attacks, during which he became blue in the face "after fighting for his breath," and sometimes passed his urine and fæces involuntarily. At 8.30 p.m., being somewhat restless and sleepless, ℞ ℥ ii. solution of morphia (B.P.), or one-fifth of a grain, were administered. Temperature 100'2°.

About midnight the patient had a sudden very severe attack of suffocation, becoming deeply cyanosed, the veins becoming distended, unconsciousness supervened, conjunctival reflexes were abolished, and there was involuntary passage of urine. The patient seemed to be *in articulo mortis*, the pulse was hard and quick. Venesection (median basilic vein) was performed, and with the removal of several ounces of blood the cyanosis diminished, and respiration improved. The whole body was bathed in profuse sweat. There was some return of consciousness, and conjunctival reflex could be obtained. The tracheotomy tube was carefully examined, and nothing wrong could be discovered with it; a feather was passed through it well down the trachea, and was followed

by a little cough, but there was no satisfactory expectoration. The patient's respiration improved a little, but consciousness never properly returned, and he died at 2.30 a.m. (March 24th).

An *autopsy* was made 16½ hours after death. A considerable layer of subcutaneous fat existed; the liver, kidneys, and heart were rather greasy on section, and a star-shaped cicatrix was found on the capsule of the liver. The upper part of the mediastinum was occupied with a large sacculated aneurism, involving the whole of the ascending and transverse portions of the aortic arch, and also the trunk of the innominate artery. The right carotid and right subclavian arteries (small and flattened) sprang from the upper and right hand portion of the aneurismal tumour. There was a great deposit of fibrinous clot in a hard mass in this portion of the aneurismal sac. Well-marked atheromatous patches were present just above the aortic valves, and also in the descending aorta. On the posterior surface of the aneurism near the right carotid and subclavian arteries a flattened nerve was found (? the right recurrent laryngeal). The trachea was pressed upon posteriorly by the mass and a little flattened. Lungs congested, with a few small areas of collapse at the base. No pneumonia. Kidneys congested, but otherwise not abnormal.

Remarks.—The short time allowed for examination of the patient during life, and the necessity for immediate measures of relief to the laryngeal stenosis, prevented a minute examination of the chest being made, auscultation being rendered very difficult also by the unnatural sounds due to stridor and tracheal *riles*. It was singular how few cardiac signs existed; there being no thrill, or, so far as could be elicited in the brief examination possible, abnormal cardiac sounds. The pressure upon the laryngeal nerves, and the condition of the radial pulse, with so far as could be determined an area of dulness over the upper and right side of the sternum, warranted a diagnosis of aneurism during life.

On the right side the recurrent laryngeal was completely pressed upon, and the vagus was also probably somewhat compressed. The large size of the aneurism and dilation of the arch rendered it likely that the left recurrent laryngeal nerve was also somewhat compressed, but all the parts were so matted together that it was exceedingly difficult to clearly make out the anatomical relation of the nerves.

Case II. : Bilateral Paralysis of the Abductors of Probable Central Origin—Tracheotomy.

The patient, a man, aged thirty-five, a labourer, applied at the Throat Hospital on April 12th, 1892, for a certain amount of difficulty of breathing, especially at night time, and occasional attacks of suffocation. An examination of the larynx with the laryngoscope showed the vocal cords to lie quite close together, leaving a very narrow glottic chink, rather broader posteriorly; the cords moved a little nearer together on deep inspiration, and approximated completely on phonation. The larynx was free from swelling of any portion of its tissues, the vocal cords being very slightly reddened. There was absolutely no attempt at abduction on inspiration; there was a little stridor on inspiration, but what was very remarkable was the apparent calm of the patient, and the absolute

freedom from urgent dyspnoea, such as one might reasonably have expected with such a narrowed glottic space. As it was considered that tracheotomy might at any moment be called for, he was at once taken into the hospital, and the following notes of the case were then taken by Dr. Permewan :—

April 13th. Patient first felt the throat trouble about three months ago, when he was much exposed to cold in his work. It began with soreness and pain in the throat, and hoarseness of voice, as also with difficulty in *swallowing*, which lasted a month. The *difficulty of breathing* came on in two days from the beginning, and has continued ever since ; from time to time this has been intensified into suffocative attacks, of which he has had five or six, but none later than seven weeks ago.

Cough.—Has been troublesome for the past two months, and several times, when more than ordinarily severe, he has brought up a little blood.

Twelve years ago patient had syphilis, followed by secondary symptoms ; he was treated for this, and for the last eleven years has had no trouble from it. Patient had rheumatic fever badly at the age of nine, and since then has had one or two slighter attacks. For the last four weeks he has felt a numbness in the right side of the face, particularly in the right side of the mouth, where, as he says, he is unable to feel if his pipe is in his mouth or not.

Present condition :

Circulatory system.—Heart : No enlargement, sounds natural, Arteries : Somewhat degenerated. Pulse : 90. There is no abnormal pulsation to be felt in the neck or chest, and no bruits can be detected.

Respiratory system.—No dulness over chest. Breath sounds weak, mostly masked by the laryngeal stridor.

Nervous system.—Brain : No headache ; sleeps fairly well. Cranial nerves : (1) Smell normal on both sides ; (2) Complaints of sight being poor in both eyes ; in left eye this came on fifteen years ago ; in the right, two months ago. Right eye : marked choroiditis, pigmentation and atrophy of choroid. Left eye : the edge of optic disc rather irregular ; (3) (4) (6) Movement of both eyes apparently normal ; (5) (7) There is marked asymmetry of the face ; the right side is smoother than the left, and the naso-labial fold is very faint on the right side. There is numbness and impaired sensation over the inner half of the right side of the face, corresponding to the supra-orbital, infra-orbital, and mental branches of the V nerve. There is excoriation about the right nostril, and patient complains that the right side of the nose is chronically inflamed. The right eye also becomes easily inflamed. There appears to be wasting of the muscles of the right side of face. The mouth is drawn up more on the left than the right, but voluntary movement of the muscles seems normal ; (8) Watch = five inches left ; — contact right ; tuning-fork inaudible at left meatus ; heard over left mastoid ; both M T indrawn, especially the right ; (9) No numbness of tongue or palate ; (10) and (11) *Vide* laryngeal condition *supra* ; no dysphagia ; (12) Normal.

Spinal cord.—No paralysis or anæsthesia of spinal nerves ; reflexes normal.

He was put upon antispasmodic treatment (pot. iod., gr. xx., t.d.s.).

April 14th. The abductor paralysis is just as great ; cords do not separate on deep inspiration. There is not such marked stridor as before ; phonation quite good ; keeps well without suffocative paroxysms ; respiration easy ; no dysphagia.

April 24th. P. is in much the same condition. No increase of symptoms. Think the glottic chink a little more open ; sleeps well ; stridor (inspiratory) during sleep ; walks well ; no affection of gait ; no loss or increase of patellar reflex, and no ankle clonus. There is a little weakness over bladder, some micturition occurring involuntarily when coughing sometimes.

April 27th. There is a good deal of incontinence of urine at night. Both pupils react very sluggishly to light, especially the left, which can only just be seen to react. To accommodation both react also sluggishly, the right perhaps rather more sluggishly than the left.

May 20th. Abductor paralysis still persists, but is a little less than formerly, a slight opening seen in glottis, but cords approximate on forced inspiration. Deafness better and incontinence better. Has no dyspnoæic attacks. The anæsthesia of face is a little better.

Feeling fairly well, and being anxious to get to his home, he was allowed to leave the hospital under promise that the moment he felt any increased dyspnoæa he would return, when it would be necessary to do tracheotomy.

On May 31st he came back, stating that since his discharge he has been getting worse, and that at night time he has had four and sometimes five bad attacks of dyspnoæa, feeling choked, and getting black in the face. The condition as regards the larynx was just the same as before, namely, complete paralysis of the abductors, but there was less anæsthesia of the right side of the face. There was no headache, but some tenderness on pressure over the right occipital region, and the neck felt slightly stiff. He had some degree of bronchial catarrh. It was deemed advisable to open the trachea, as the laryngeal symptoms did not yield in the least to full doses of iodide of potassium, and tracheotomy was accordingly performed on June 1st. Since that time up to the present the patient has been apparently comfortable, and a cough he had at the time of operation has since passed off. The condition of the larynx remains just the same, and will probably always do so.

DIPHTHERIA AND THERAPEUTICS.

Stein (Saaz-in-Böhmen).—*Therapy of Diphtheria*. "Thüringische Monats.," 1892, No. 4.

RECOMMENDATION of insufflations of sulphur and quinine. *Michael*.

Kahn (Würzburg).—*Results of Treatment with Cantkaridinum*. "Therap. Monats.," 1892, No. 5.

No effect by subcutaneous injections in cases of tuberculosis of the

larynx ; some effect if the same treatment be given in cases of rhinitis, laryngitis, and tracheitis sicca, but the author does not recommend the treatment because of its toxic effects.

Michael.

Fulton.—*Diphtheria and its Treatment.* "Med. News," April 23, 1892.

EARLY application of strong solutions of nitrate of silver followed by astringent and antiseptic gargle and insufflation of $\frac{1}{100}$ th of a grain of corrosive sublimate every four hours, by means of an instrument devised by the author, constitutes the local medication. At the same time, the usual mixture of iron and chlorate of potash is prescribed.

B. J. Baron.

Watkins.—*Treatment of Spasmodic Croup and allied conditions by Compound Tincture of Iodine.* "New Orleans Med. and Surg. Journ.," Feb., 1892.

ONE-FIFTH of a drop of the compound tincture of iodine in water was given to a child, two and a-half years old, every fifteen minutes. In an hour almost all croup symptoms were gone, and it was then given every two hours until next day ; then every four hours for four days, and the child was cured.

B. J. Baron.

Florschütz.—*Gangrene of the Lungs and Diphtheria.* "Correspondenzbl. des Aerztlichen Vereins in Thüringen," 1891, No. 12.

A TEACHER suffering from gangrene of the lungs gave his lessons during the first period of his disease, and it is believed he expectorated on the floor of the school. Some of the school children, and the children of the workman who removed the wood of the floor, got diphtheria. The author believes that there is a connection between the two diseases.

Michael.

Hochhaus.—*Diphtheritic Paralysis.* "Virchow's Archiv," Band 124.

THE author does not agree with the view that the cause of the diphtheritic paralysis is in the nerves, or in the central nervous organ. He found inflammatory degenerations in the muscular fibres and the inter-muscular substance. The muscular ends of the nerves were normal, so he believes that paralysis are caused by the toxic effect of the specific virus on the muscles.

Michael.

Schemm.—*Degeneration of the Muscles of the Heart in Diphtheria.* "Virchow's Archiv.," Band 121, Heft 2.

IN thirteen cases dead from diphtheria, the author found fatty and granular degeneration of the fibres, swelling of the nuclei, hyaline degeneration, and atrophy.

Michael.

Bluck (Denver, Col.).—*The Effects of Altitude upon the Mucous Membranes of the Upper Air Passages.* "New York Med. Journ.," April 9, 1892.

THE atmospheric pressure in Denver is about 12lbs. per square inch. The effect of this on a person who has been living at sea level is to stimulate the vaso-inhibitory nerves, in order to arrest the vascular dilatation of the superficial capillary system of the whole body, and especially so of the mucous membrane of the upper air tract. This

amount of nerve force is unusual, and can only be kept up for a certain length of time, and finally gives way. The result of this is capillary dilatation, especially in exposed mucous surfaces, because the amount of nerve force required for them is greater than that required for cutaneous surfaces, and therefore fails earlier. The days are very hot and the nights cold, and the nervous force being depressed the loss of heat results in a much more marked relaxation of the vaso-motor control, and acute rhinitis and tracheitis, with some feverishness and a feeling of tiredness. Resolution commonly comes on about the tenth day, and the person feels quite well in about three weeks. Physiologically, in an ordinarily humid climate, one pint of water is secreted by the nose in twenty-four hours, but the climate of Colorado is only one-half as damp as that of New York, so that the nasal mucous membrane in the former has twice as much to do as in the latter place. The effect of this is to cause dilatation of the vascular sinuses, and a true hypertrophy of the mucous membrane covering the turbinated bodies, with resulting stenosis.

As regards treatment, nothing new is suggested. *B. J. Baron.*

Schlatter (Zürich).—*Tracheotomy and Intubation in Treatment of Diphtheritic Laryngeal Stenosis.* "Corresp. für Schweizer Aerzte," 1892, Nos. 5, 6.

THE author reports on 510 cases of diphtheria of the larynx. Tracheotomy was performed in 408 of these cases, with 69 cures. Intubation was performed in 34 cases, with 19 deaths. In ten of these cases the tracheotomy followed the intubation. Of the latter, nine died. In two cases of chronic stenosis (one granulation stenosis; another, stenosis of the trachea in consequence of tracheotomy) intubation was performed with best results. The author concludes that tracheotomy will remain the best method in treatment of laryngeal diphtheria, but that in carefully selected cases intubation may sometimes do. In cases of chronic stenosis intubation may be applied with good results.

Michael.

Faulkner (Alleghany).—*A Collective Enquiry concerning Intubation.* "Med. News," April 9, 1892.

THE opinions of a number of medical men, specialists and others, are given, but it is difficult to deduce any rules for guidance, as to the value of intubation as opposed to tracheotomy, from reading the paper.

B. J. Baron.

Bloebaum (Coblenz).—*Communications on Galvano-Cautic and Electrolytic Operations, and the After-Treatment of Cases by New Medicaments, especially in the Treatment of Diseases of the Eyes, Ears, Nose, and Naso-Pharynx.* "Deutsche Med. Zeit.," 1892, No. 45.

IN after-treatment of galvano-caustic operations the author applies methyl-violet and soda sozoiodol. It is interesting to note a case of naso-pharyngeal polypus treated with success by electrolysis.

Michael.

NOSE AND NASO-PHARYNX.

Kuchenbecker (Basel).—*Contribution to the Etiology and Therapy of Empyema Atri Highmori.* "Monats. für Ohrenheilk.," 1892, Nos. 3, 4, 5.

WELL-WRITTEN review.

Michael.

Bauer.—*Pus in the Antrum of Highmore.* Aerztlicher Localverein Nürnberg. Meeting, Jan. 7, 1892.

NOTHING new.

Michael.

Peters (Bonn). — *The so-called Blennorrhœa sacci lacrymalis neonatorum.* "Klin. Monats. für Augenheilk.," 1891.

THE author does not believe that this disease is ever caused by nasal affections.

Michael.

Schweinitz.—*Some Cases of Obstructive Disease of the Lachrymal Passages and the associated Intra-nasal Lesions.* "The Times and Register," April 9, 1892.

CASE 1. Purulent dacrocystitis; traces of old rhinitis and abnormal shape of the lower turbinated bone.

Case 2. Catarrhal dacrocystitis; bands of adhesion from the inferior turbinated body to the septum.

Case 3. Lachrymal abscess; spur on the septum opposite the middle turbinated bone; chronic pharyngitis.

Case 4. Epiphora; atrophic catarrh.

Case 5. Phlegmonous dacrocystitis; deflection of the septum; spur on the left side pressing on the inferior turbinated bone.

Case 6. Stricture of the nasal duct; moderate hypertrophy of the inferior turbinated on the left side and a spur on the right side.

Case 7. Epiphora from swelling of the mucous membrane of the lachrymal duct; atrophic rhinitis.

The above cases formed the subject of an admirable paper read before the Philadelphia County Medical Society on March 23rd, 1892, and all those who discussed the matter agreed in the main with Dr. Schweinitz, that successful treatment of a good many eye cases is ensured only when the nose is carefully examined and abnormalities in it appropriately treated.

B. J. Baron.

Knight, Charles (New York).—*Cyst of the Middle Turbinate Bone.* "New York Med. Journ.," March 19, 1892.

THE patient, a middle-aged woman, had her right nostril blocked up by a mass which could distinctly be seen, on elevation of the tip of the nose, without the use of any speculum. On palpation the mass was hard and resistant, with no signs of a polypoid condition of the mucous membrane. The septum was deviated to the left, and there was hyperplasia of the mucous membrane of the left naris without apparent bony change. The

symptoms complained of were impaired nasal respiration, impaired sense of smell, and persistent headache. The voice was nasal, and there was considerable post-nasal discharge. The mass was removed by means of the cold wire snare and cutting forceps. The author calls attention to the frequency of reflex neurosis, hemicrania, and neuralgias of the fifth pair of cranial nerves in these cases. This cystic transformation is rarely found in the inferior turbinated body. The condition is frequently associated with well-defined myxomata or polypoid degeneration. The author refers to the theories which have been advanced to explain the occurrence of bony cysts in the nose, viz., that the condition is due either to a rarefying osteitis, similar to that occurring in long bones, or to an osteophytic periostitis secondary to hypertrophic rhinitis involving the soft parts. The indications for treatment are :

- (1.) Interference with nasal respiration.
 - (2.) Prevention of nasal drainage.
 - (3.) Reflex neuroses.
 - (4.) Anosmia.
 - (5.) Impaired quality of voice.
- Hæmorrhage during the removal of the cyst is seldom excessive.

W. Milligan.

Dunn (Richmond, Va.).—*Concerning the Adenoid Tissue of the Pharynx and Naso-Pharynx.* "New York Med. Journ.," April 9, 1892.

NOTHING new.

B. J. Baron.

MOUTH, PHARYNX, &c.

Koch, Carl.—*Actinomycosis of the Under Lip.* Aertlicher Localverein Nürnberg. Meeting, December 5, 1891.

A PATIENT, twenty-five years old, had a tumour the size of a cherry on the under lip. The half of the lip was swollen. In the expelled pus little yellowish masses were found, whose microscopic examination showed actinomycosis. Excision of the diseased parts ; cure. *Michael.*

Stern (Dusseldorf).—*Malignant Neoplasms in Children.* "Deutsche Med. Woch.," 1892, No. 22.

REPORT on cases published of malignant neoplasms in early age. Of interest is a case of a child, four years old, in whom the author had extirpated a neoplasm of the size of a nut from the tongue. The microscopic examination showed it to be a sarcoma fusiform. *Michael.*

French (Brooklyn).—*A Device to Prevent Mouth-Breathing during Sleep.* "New York Med. Journ.," April 16, 1892.

THIS consists of a piece of "washblonde," which is attached to straps of light webbing and adjusted to the head in the manner shown in a sketch that accompanies the paper. *B. J. Baron.*

Kozsanecky (Berlin).—*Morphology of the Muscles of the Palate*. "Archiv für Anatomie und Physiologie," 1891.

OF comparative anatomical interest.

Michael.

Thorner (Cincinnati).—*Sore of the Pharynx and the Nasal Cavity in an Adult during Influenza*. "New York Med. Woch.," Feb., 1892.

A PATIENT, seventeen years old, during an attack of influenza, had white spots on the tonsils and in the mouth. The next day the whole nasopharynx was filled with the same masses, which the following day also filled the nasal cavity. Treated with bicarbonate of soda; cure. The microscopic examination showed that the masses consisted of ooidium albicans.

Michael.

Dubler (Basel).—*Two Cases of Acute Infectious Phlegmon of the Pharynx*. "Virchow's Archiv," Band 126, Heft 3.

BACTERIOLOGICAL examinations of two cases dead from infectious phlegmon. Both cases, and also a third, were complicated with diphtheria. Streptococci were found. The author believes that erysipelas of the pharynx and phlegmon are identical.

Michael.

Rosenthal, Carl (Berlin).—*Pharyngeal Bleedings*. "Deutsche Med. Woch.," 1892, No. 21.

A PATIENT, twenty-five years of age, had a hæmorrhage after hard work. A bleeding point could be detected in the left tonsil. Chloride of iron was applied, and the bleeding stopped. A second recurrence was stopped by the application of ice. As no pathological conditions could be detected, it was in all probability due to laceration of a blood-vessel.

Michael.

Newman, D. (Glasgow).—*Malignant Disease of the Tonsils, with ten illustrative Cases: the Statistics and the Bibliography of the Subject*. "The American Journ. of the Med. Sciences," May, 1892.

THE author does not believe that the disease is rare, having met with ten cases in seven years. In carcinomatous disease, the lymphatic glands become rapidly involved, whereas in some of the sarcomata this may be absent for a long time, the tumour remaining encapsulated for a considerable period. The most common form of sarcoma is the round-celled or lympho-sarcoma, in which secondary formations rapidly develop.

The author relates the history of one case of encapsulated spindle-celled sarcoma of the left tonsil, of slow growth and without glandular swelling, which was operated upon through the mouth. There was no local recurrence for five years. Then a sarcoma formed in the right tonsil, rapidly involving the lymphatic glands, palate and pharynx, and the patient died from hæmorrhage and exhaustion five years and three months after the first appearance of the disease in the opposite tonsil. A second case of lympho-sarcoma of the right tonsil followed acute inflammation with suppuration, the disease rapidly extending to the palate, pharynx, tongue, and lymphatic glands. Operation was not undertaken, and the patient died in five months from hæmorrhage and exhaustion.

In a third case, carcinoma followed upon a syphilitic gumma of the right tonsil, soft palate and pharynx, with enlargement of lymph glands.

The author's fourth, fifth and sixth cases were epithelioma of the tonsil, in one of which death from exhaustion occurred within three months, and in the other within six months. The seventh case was epithelioma of the tonsil and soft palate, in a patient who suffered years previously from syphilitic ulceration of the throat. The eighth case was one in which an early diagnosis of epithelioma was made, and there was no glandular enlargement. The growth was completely removed by operation, and there was no recurrence nineteen months after. In the ninth case of epithelioma of the right tonsil, operation being refused, the growth slowly spread to the gum and glands and caused severe hæmorrhages, the patient succumbing eighteen months after the onset of the disease. The tenth case is still under observation.

The difference between carcinoma and sarcoma of the tonsils is marked by the formation of sloughs and foul cavities in the former, whereas in sarcoma the tumour remains consistent while the capsule is unbroken, which may be for a long time, but when this occurs spreading and ulceration follow with great rapidity. Sarcomas may remain limited within their capsule and be capable of complete removal.

Epithelioma is, next to the acute forms of malignant disease, the most common variety, occurring in twenty-four out of ninety-two collected cases of carcinoma; scirrhus occurred seven times; fibro-sarcoma and adeno-sarcoma are rarities.

Surgical treatment has been indifferently successful, because the true nature of the case has often not been sufficiently early recognised, being mistaken often for inflammatory or syphilitic affections, and permitted to invade surrounding structures and lymph glands. The tonsil and surrounding structures must be removed thoroughly and early. Dr. Newman advises tracheotomy a week before operation. Incomplete methods of removal—*e.g.*, chemical caustics, *écraseur* ligature, tonsillotome, curette, electrolysis—require only to be mentioned to be condemned as not holding out the least prospect of cure, and the only question worth consideration is the relative merit of removal through the mouth or by external incision.

Dr. MacEwen removed a carcinoma of the tonsil by external incision, and the patient was alive and well twelve years after; and in a second case operated on by him the patient was well two years after. Besides these there are only four cases of cancer of the tonsil in which recurrence did not take place after operation (Quintin, Fowler, Miculicz, Newman). In two of these (Fowler and Miculicz), cancer subsequently attacked other parts. As to sarcoma, Barker, Cheever, Gorecki, Canswer, Homans, Langenbeck, Richardson and Newman have recorded the most successful cases. In Richardson's case the patient was well five years after operation, and in Newman's case the patient died from round-celled sarcoma of the opposite tonsil five years after the first operation. As to palliative treatment, a mouth wash (borax, carbonate of potash, chlorate of potash, glycerine and carbolic acid) every three hours, with a spray of liq. hyd. perchlor. three times a day, or iodoform in ether and

alcohol, eucalyptus, soda-salicylate, and sulpho-carbolate of zinc are useful. Antiseptic tablets (cocaine, $\frac{1}{2}$ gr., perchlor. of mercury $\frac{1}{100}$ gr., iodoform $\frac{1}{2}$ gr., chlorate of potash xx gr., sugar x gr.) dissolved in the mouth but not swallowed, are useful. The progress of the disease is delayed, as well as immediate comfort secured, by these means.

Pain may be relieved by liniments of camphor and chloral (equal parts) applied over the neck, sprays of 10 per cent. cocaine before food, morphine, tincture of belladonna, stramony or other sedatives as gargles. Dyspnœa must be relieved by tracheotomy, and dysphagia by feeding through a soft flexible tube introduced into the œsophagus or nose. Partial removal of the tumour is followed by rapid increase in size. Hæmorrhage is very common, especially in round-celled sarcoma and encephaloid carcinoma. Antipyrin 1 in 50 may be employed as a gargle, or the tumour be ligatured at the base or cauterized with the thermo or galvano-cautery. Failing these, ligature of the lingual and facial, or, as a last resort, of the carotid may be necessary. When blood in the trachea threatens suffocation, a tampon tube should be introduced through the tracheotomy wound, as it is difficult to plug the larynx through the mouth.

[An extensive bibliography of the subject is given by the author, and many of the cases are subjected to critical study. Dr. Newman's contribution is the best which has yet been made on the subject, and deserves careful reading in the original.]

R. Norris Wolfenden.

Robinson, Beverley.—*Some Nasal, Throat, and Aural Symptoms and Disorders met with in Influenza.* "New York Med. Journ.," April 16, 1892.

"ASIDE from the fact that the nasal, throat, and aural symptoms and disorders met with in influenza accompany general phenomena which establish their probable nature, we cannot affirm that they are invariably characteristic or different from those encountered separately, and in no sense indicative of an infection of the entire system.

"But when this has been said, we must add that there are occasionally some noticeable peculiarities about the affections referred to, and others still of the nose, ear, and throat, as observed in epidemic influenza."

In one case, repeated and profuse epistaxis, due to intense venous turbidity of the pituitary membrane, accentuated by rupture or ulceration of the septal artery, preceded influenza, when the soft palate, fauces and larynx became deeply congested. Helwig has noted extreme hyperæmia of the pia mater and brain, which must be looked on as the first stage of true inflammation, so that we can readily understand why the nose bleeds so profusely.

Pain in the throat, when congested, is more pronounced in influenza cases than usual. The mischief is very apt to extend upwards to the naso-pharynx and to the middle ear. If the ear be attacked, the membrane may become sunken and thickened, mucus is thrown out around the ossicles, and a permanent partial ankylosis, with deficiency of hearing, occurs.

In other cases, intense stomach irritability with follicular tonsillitis ushers in the attack, and the latter condition clears up quickly, and does

not exhibit so many follicular deposits as in ordinary cases; pain is, however, a very pronounced symptom. Severe pain of short duration precedes perforation of the drumhead frequently where the ears have previously been quite healthy, and there is no doubt that influenza lights up inflammation in an ear that had some time previously been inflamed but had reached a quiescent state. [We can all confirm this observation—*Rep.*] Ecchymosis in the pharynx and larynx has been fairly frequently noted. Dr. Robinson has never seen ulcerations, pronounced cedema, or membranous deposits.

The cough of influenza has various underlying causes, but apart from congestion and inflammation of the throat, intense gastric catarrh will cause it, and it is then allayed by appropriate gastric remedies. Also a depressed state of the nerve centres permits of cough being readily induced, owing to the inflamed nerve filaments being unduly sensitive. Choreic movements and spasmodic conditions affecting the larynx are rare and late sequelæ.

Sudden inflammation of the muscles of the neck with pain, redness, and rigidity, but rapidly subsiding within twenty-four hours, was observed in one case. The author prescribes the following tablet—

Caffein citrat	gr. $\frac{1}{2}$
Phenacetin	gr. i.
Ammon. salicylat.....	gr. iii.

One every two or three hours. Alkalies are also administered along with this. Other appropriate local treatment by sprays, gargles, poultices, &c., is also of use. Gargling with carbolized alkaline solutions is regarded as an excellent and reliable prophylactic. [I rely considerably on this prophylactic, and frequently used it during the late epidemic in Bristol.—*Rep.*]

B. J. Baron.

LARYNX.

Moskowitz (Budapesth).—*Sclerosis of the Air Passages.* "Pesther Med. Chir. Presse," 1892, No. 6.

A PATIENT, fifty-two years old, had rhinoscleroma, which spread to the larynx and trachea, for six years. She wore a tracheal canula. She came with strong attacks of suffocation, and died two days later. The *post-mortem* examination showed sclerosis of the nose, pharynx, larynx, and trachea.

Michael.

Frühstuck.—*Prophylaxis of Tuberculosis of the Lungs and Larynx.* Dissertation. Göttingen: 1891.

REVIEW.

Michael.

Rice.—*The Troublesome Symptoms caused by Enlargements of the Epiglottis, and the Advisability of Reducing the Size of this Cartilage by Operative Measures.* "New York Med. Journ.," April 9, 1892.

THE author believes that the epiglottis becomes enlarged and congested when there is no corresponding congestion of the larynx, and when there

is no hypertrophy of the lingual tonsil. Such an abnormal epiglottis causes troublesome symptoms either by touching the tongue or the sides of the pharynx, and by becoming periodically inflamed and swollen. He attributes the abnormal shape of the cartilage, which we often see, to such contact.

Enlargement of the lingual tonsil is said to be the most frequent cause of epiglottic trouble, but congenital formation must be taken into account. Normally, the margin of the cartilage escapes the posterior wall of the larynx by the distance of one-fourth of an inch; if it be elongated it touches it. A broad epiglottis, on the other hand, is very apt to come in contact with the sides of the pharynx if there is any lymphatic enlargement. If there be a sharp anterior curvature of the superior margin, then it is subjected to friction with the base of the tongue. The pendulous epiglottis is due to the increased weight of its margin, caused by disease, *e.g.*, tubercle, fibroma, etc., and an article by Sir Duncan Gibb is quoted as showing that natives of hot climates are liable to this from relaxation.

An unusually high position of the cartilage exposes it during deglutition, and impurities in the atmosphere affect it unduly; therefore, alcohol and tobacco are especially liable to excite congestion. Dyspeptic troubles and pulmonary or cardiac disease keep the epiglottis worried.

As regards the morbid histology of the enlargement, it is a cartilaginous hypertrophy. The symptoms of this hypertrophy and the accompanying congestion are tickling and feeling of fulness in the larynx, spasmodic cough, vomiting, partial loss of voice, "empty swallowing," and fatigue of the voice.

As regards treatment, no astringent is of any value; cocaine and oily solutions are temporarily helpful, but do not cure. Removal of part of the epiglottis by the cautery is risky from the amount of inflammatory œdema induced, and the author uses a pair of long-handled scissors to snip off the redundant margin. Bleeding is free, but can be checked by the application of nitrate of silver. Inflammation following the operation is not severe.

B. J. Baron.

Roaldes.—*A Case of Atresia Laryngis from Catarrhal Laryngitis, with Presentation of the Patient, followed by Intubation.* "New Orleans Med. and Surg. Journ.," Feb. 1892.

THE cause assigned for the marked atresia that existed in this case, and which was just such as one sees so frequently after syphilitic ulceration, was a cold caught by getting thoroughly wet. Canulas were introduced and Whistler's instrument, but the opening into the larynx refused to remain dilated. Tracheotomy had to be performed, and since then Schrötter's tubes have gradually dilated the opening until a No. 4 can be introduced, and lastly O'Dwyer's tubes have been used with success. The author relies on the facts that all history of syphilis is absent, and that there is no evidence of tubercular mischief, for making the diagnosis of a mere catarrhal laryngitis *a frigore*, and such ulceration following it as to lead to such serious results. He quotes a similar case in Schrötter's practice published by Zuffinger.

As regards treatment the author mentions three methods :—

1. The endo-laryngeal method alone by Mackenzie's dilator, Whistler's cutting dilator, Navratil's and Moure's instruments, and Schrötter's tubes, all of which can only be kept *in situ* a short time. Of those that are destined to remain in the larynx for long periods, O'Dwyer's intubation tubes are regarded as best.

2. Tracheotomy followed by dilatation by Schrötter's method.

3. Laryngotomy.

This ought to be limited to cases of chronic stenosis due to obstructive neoplasm, or for the extraction of foreign bodies. *B. J. Baron.*

Schmiegelow (Copenhagen).—*Intubation of the Larynx in Acute and Chronic Stenosis.* "Monats. für Ohrenheilk.," 1892, Nos. 1, 2, 3, 4, 5.

(A.) Of four cases of acute diphtheritic stenosis, in which intubation was performed, three died. (B.) Chronic stenosis :—(1) A patient, seven years old, had a stenosed trachea from a tracheal canula. Treatment by intubation. The extensively communicated case is not yet cured. [Some months later sudden death from asphyxia.] (2) A child, six years old, had had tracheotomy performed for diphtheria three months previously. Intubation. Cured after having intubation kept up for a whole year. (3) A patient, thirty-three years old, wore a tracheal canula for fifteen years because of diffuse stenosis and hypertrophy of the mucous membrane. Intubation; death some days later from asphyxia. (4) A patient, four years old, had had tracheotomy performed eight days before. The canula could not be removed. Intubation during a month; cure. (5) A patient, two and a half years old, had had tracheotomy performed because of diphtheria seven months previously. Granulation stenosis; intubation; death from asphyxia. Cases 6, 7, and 8 not yet cured. [The results are so unfavourable that we cannot agree with the author in the recommendation of the method.] *Michael.*

Brown, Dillon (New York).—*A Case of Stenosis of the Larynx, in which the Intubation Tube was retained nine months; recovery with a good voice.* "Arch. of Pediatrics," June, 1892.

A LITTLE girl, aged three and a quarter, had intubation done seven days after the first appearance of laryngeal symptoms. Twelve days after marked dyspnœa was present, during the course of an attack of diphtheria. Dyspnœa was immediately relieved, and a piece of pseudo-membrane was coughed up. At the end of seven and a half days the tube was removed, but had to be returned within fifteen minutes on account of return of dyspnœa. Four different attempts were made to remove the tube, but it had to be returned each time, after intervals ranging from four hours to thirteen days. It being impossible to insert a full-sized O'Dwyer's tube, and the smaller one not relieving dyspnœa, tracheotomy was performed. There was marked stenosis of the trachea, not extending along its whole length. At the time of operation only the inner tube of the canula could be pushed into the trachea, where it fitted very tightly, but next day the parts being stretched a regular tube could be inserted. A month after the tracheotomy tube was removed, and after dilating from below with sounds, a three-year old O'Dwyer tube was

inserted. An attack of pneumonia subsequently followed. The tube was removed every month or two, but always had to be reinserted within an hour. Digital exploration proved the larynx to be occupied with granulation tissue overlapping the edge of the tube. A larger tube was inserted to press upon the granulations, and subsequently this could be finally removed, and there has been no return of dyspnœa, and the patient is now perfectly well, and has a good though at times rather harsh voice.

R. Norris Wolfenden.

Grünwald (München).—*Primary Inflammations of the Crico-Arytenoid Joint.* "Berliner Klin. Woch., 1892, No. 20.

THE author has observed five cases in which he believes there was primary inflammation of the crico-arytenoid joint. They had all the following symptoms:—(1) Disagreeable feeling in swallowing on both sides of the neck, sometimes felt in the tonsils or in the hyoid bone; (2) this feeling was increased by pressure in the region of the joint; (3) the feeling was increased in the dorsal position; (4) crepitation of the painful point; (5) pain on pressure on the same part, and also by rotation of the arytenoid cartilage to the inside; (6) hyperæsthesia of the region of the joint when touched with a probe.

Michael.

Krause (Berlin).—*Centripetal Conduct of the Nervus Laryngeus Inferior and the Pathological Median Position of the Vocal Band.* "Berliner Klin. Woch.," 1892, No. 20.

NINE experiments made by the author gave the following results. The view of Burkart, that the nervus laryngeus inferior has not only centrifugal but also centripetal functions, must be allowed, and that centripetal irritation of the nerve produces not only expiration position of the diaphragm and arrest of the respiration, but also constriction of the larynx, adduction of the vocal bands, and persistence of the vocal bands in the position of adduction; also by electrization of the nerve its sensibility is proved. The laryngeus inferior, therefore, is a mixed nerve. As such it can produce reflex symptoms, as tremor, spasm, and contractions. Concerning the posticus the author agrees with Hermann von Meyer and Jelenffy that it is not only a muscle of respiration, but also the regulating antagonist of the crico-arytenoid muscle (anticus) in its phonatory functions. So we understand that the muscle also is touched by every irritation of the whole larynx, and answers by reflex contraction of the vocal band. The atrophy sometimes found is produced by the persistent effect of mechanical irritation on the nerve by which the less resistant muscle becomes atrophic.

Michael.

Meyes (Amsterdam).—*Case of Laryngeal Chorea Cured.* "Monats. für Ohrenheilk.," May, 1892.

A PATIENT, fifty-two years old, had a dry, irritating cough for four years. Cured with antipyrin.

Michael.

Bowen.—*A Fatal Case of Laryngismus Stridulus in an Infant Six Days Old.* "Med. News," April 16, 1892.

THIS was a healthy child with no sign of rickets, with no pharyngeal or

laryngeal abnormality, and whose parents were healthy, strong people. The author thinks that we ought to administer chloroform in severe cases rather than wait for more slowly acting drugs to exert their effects. He has not been able to find records of any similar case in so young an infant, which was fatal.

B. J. Baron.

Lichtwitz (Bordeaux).—*Operation for Multiple Papillomata of the Larynx in a Child; Intubation.* "Deutsche Med. Woch.," 1892, No. 20.

THE report of the meetings of the Société de Laryngologie, Rhinologie, et d'Otologie of Paris in this Journal.

Michael.

Schäfer (Heidelberg).—*Diffuse Pachydermia of the Larynx.* Verein der Pfälzischen Aerzte, 1891, No. 7.

DESCRIPTION of five cases of pachydermia observed in Jurasz's clinic. The cases were improved by removal of the diseased parts.

Michael.

Giles, Anstey (Adelaide).—*A Case of Partial Laryngectomy.* "Australasian Med. Gaz.," Feb., 1892.

THE patient, a married man, aged fifty-one, had complained for three or four months of hoarseness, and a disagreeable sensation, hardly amounting to pain, whenever he swallowed. The voice had been becoming gradually more and more husky. There was cough and profuse expectoration, especially at night. There had been no hæmoptysis, although on two or three occasions the sputum had had a sanious tinge. His previous health had been good, and he had never suffered from any venereal trouble. His father died of cancer of the stomach, but no other relative had suffered from malignant disease. The pharynx was found to be healthy. On laryngeal examination the posterior part of the right vocal cord was found ulcerated, and a fungating mass infiltrated the ventricular band and the ary-epiglottic fold. The right arytenoid cartilage was much swollen. The left half of the larynx appeared fairly healthy; the vocal cord was somewhat congested, but was otherwise normal, and moved freely. The right cord was firmly fixed. Portions of the projecting mass were removed by means of Schrötter's forceps, and on section presented the appearances of true epithelioma. There were no enlarged glands in the neck. The heart and lungs were healthy. It was decided, from the fact that the growth was limited to one side of the larynx and also from its recent origin, to remove one-half of the larynx. A high tracheotomy was first performed and a Trendelenburg's india-rubber inflating tampon canula inserted. The thyroid perichondrium and the soft parts lying over it were carefully peeled off from the cartilage by means of a raspator. The cartilage was then divided along its centre. During the progress of the operation the rubber tampon collapsed, with the result that a quantity of mucus and blood passed into the trachea, and set up troublesome coughing. The operation had accordingly to be finished somewhat quickly. At first the patient seemed to do well, but on the second day died of septic pneumonia. The author attributes the want of success to the failure of action of the tampon-canula, and strongly advises the use of Hahn's instrument (which unfortunately he had been unable to

procure) in place of Trendelenburg's. He also strongly advises the stripping of the perichondrium, together with the soft tissues from the thyroid cartilage, as a decided advance in this operation. In cases of carcinoma affecting both sides of the larynx he recommends tracheotomy in preference to total extirpation.

W. Milligan.

THYROID GLAND.

Hofmeister.—*Physiology of the Thyroid Gland.* "Fortschritt der Medicin, 1892, No. 3.

IN rabbits whose thyroid gland was extirpated the author found that the hypophysis cerebri had double the weight of that of other animals. In the animals without thyroid gland the development of the bones was also much diminished.

Michael.

Podbelsky (Kasan).—*On the Existence of Colloid in the Lymph Vessels of Goitre.* "Prager Med. Woch.," 1891, Nos. 19, 20.

TWENTY cases examined, in four of which colloid substance was found in the lymphoid vessels.

Michael.

Lydston, F. (Chicago).—*Cases from Private Practice.* 1. *Acute Thyroiditis with Abscess.* "New Orleans Med. and Surg. Journ.," May, 1892.

A YOUNG man of twenty-four, with incipient pulmonary phthisis, improved very rapidly on the Shurley-Gibbes treatment, when the right thyroid lobe began to swell, and was painful on pressure. Dysphagia occurred and the temperature rose to 103½. The tumour being aspirated allowed exit of some pus. On being tapped, three ounces of pus were withdrawn; the cavity of the abscess was irrigated with peroxide of hydrogen, and pus ceased to form though the gland remained large.

This and one other case of thyroiditis with abscess led the author to conclude that it is not good practice to wait for fluctuation in such cases, the capsule and thyroid tissues being so dense as to mask this symptom. Pain is disproportionately severe in such cases, and a small punctured incision is better than a free one, the gland shrinking rapidly after evacuation of the abscess, and hæmorrhage is thereby avoided.

R. Norris Wolfenden.

Kugler (Graz).—*The Diagnosis of Accessory Goitres.*—"Wiener Med. Woch.," Nos. 13, 14, 15.

A PATIENT, twenty-two years old, had on the right side of the neck a tumour of the size of a little apple. The tumour could be moved, but seemed to be fixed to the hyoid bone. The tumour was noticed in the patient in his eighth year, and was at that time the size of a bean, and gradually increased. It was diagnosed as accessory goitre, and removed. Cure. The author then referred to the diagnostic symptoms

of the disease, and concluded with the relation of a case, in which a lipoma of the neck was so similar to a goitre that it was only by very careful examination he could distinguish it. *Michael.*

Wolf, Julius.—*On the Extirpation of Goitre.* Freie Vereinigung der Chirurgen in Berlin. Meeting, May 9, 1892.

SUDDEN death during or after the operation can be caused by entrance of air into the veins; by too great loss of blood; by accumulation of mucus in the trachea and mouth. After partial resection of the goitre the remaining part of the gland becomes atrophic. In such cases the cachexia is not observed. The author showed five cases which were successfully operated upon. Parenchymatous bleedings during operation are treated by tamponing with iodoform gauze. *Michael.*

E A R.

Barclay (New York).—*A Case of Sudden Deafness from Inherited Syphilis.* "Med. News," April 30, 1892.

A GIRL, twelve years of age, who had had some signs of aural catarrh, suddenly lost her hearing at a time when she was cutting four molar teeth. The drumheads are only slightly affected, and inflation is useless. She has typical "Hutchinson" teeth. There is a history of miscarriages and early deaths of brothers and sisters, and the father confesses to having had syphilis. The author lays stress on the fact of the occurrence of the deafness a short time before puberty: that there was a predisposing cause, viz., chronic catarrh of the ear; and that there was the exciting cause of reflex irritation from the eruption of four second molar teeth simultaneously. *Dundas Grant.*

Corradi, C.—*The Perception of Acute and Low Tones as a Diagnostic Criterion in Ear Affections.* "Archivio della Specialita Medico-Chirurgie, etc." Naples.

THESE observations were in part communicated to the Medical Congress at Sceria, and have since been fully published, with the following conclusions:—

1. Up to the present time we are not authorized to admit, either from an anatomical or physiological point of view, that the diminution of the perception of acute tones represents a symptom of lesion of the inner ear, it being difficult to exclude with certainty the participation of the middle ear in the progress of the disease.

2. If in some species of deafness the perception of acute sounds seems to diminish in comparison with that of the lower tones, while in others the perception of the latter in comparison with the perception of the former (acute tones) occurs, this is to be imputed, at least in part, to the special character of these tones, which naturally prohibits the acute tones,

from attaining a certain degree of intensity, while the low tones gradually recede with the diminution in number and regularity of their vibrations from the phœnic type, which is most homogeneous to the human ear. In all kinds of deafness the perception of acute sounds diminishes, and the more serious and deep the affection is, so much the more diminishes the perception of acute tones, which in general is little or nothing for the lower tones. If this fact occurs (diminution of perception of the low tones), it may co-exist with a strong diminution of perception of the acute tones or not.

3. In the tympanum we have various well-defined anatomical and physiological conditions, which may influence the perception of acute tones.

4. In no malady of the ear does there exist a true and proper diminution of perception of the low tones, relatively to their transmissibility through the air; it may, however, be held that in certain maladies of the organs of transmission, owing to conditions not yet well defined these become in some way affected.

5. If the theory of Helmholtz is proved to be true (diminution of perception of the low tones), the diminution for the low tones must also in all probability be admitted, even for a simply localized malady of the labyrinth.

6. Taking into consideration the insufficiency of the various disposable criteria to make a diagnosis of the seat (of disease), Corradi believes that a criterion hitherto but little appreciated—that is to say, the degree of the deafness—must be taken into consideration. *V. Grazi.*

Ferrer and Clark (San Francisco).—*Report of Cases of Disease of the Mastoid Process.* "Arch. of Otol.," Jan., 1892.

VERY instructive clinical histories of several cases illustrating the complications not uncommonly occurring. A drawing is given of a bone forceps with powerful blades cutting (like two spoons) at the tips only. Küster's method of cutting away the posterior wall of the meatus, and thus throwing antrum and meatus into one, is recommended by the results obtained. One point brought out by a perusal of these cases is the importance of free communication between the meatus and the antral wound (whatever operation be practised), improvement and retrogression appearing to coincide with permeability and closure respectively.

Dundas Grant.

Lake, Richard (London).—*On the Structure of Aural Polypi.* "Arch. of Otol.," April, 1892.

OUT of eighteen specimens nine were fibroma myxomatoides, four granuloma, two soft fibroma, two firm fibroma, and one angio-fibroma myxomatoides. The origin of the myxomatous tissue which appears so frequently is not quite clear. The resemblance of the structure of aural polypi to scar tissue in various stages of growth bears out to a certain extent, the theory that they originate usually as exuberant

granulations, due generally to caries of the subjacent bone. The fibromata had a well-marked epithelial covering (with prickly cells), and the occasional recurrence of cysts in them was explicable by the degeneration of ingrowing epithelial columns.
Dundas Grant.

Lane, Arbuthnot (London).—*Antrectomy as a Treatment for Chronic Purulent Otitis Media.* "Arch. of Otol.," April, 1892.

MR. LANE has, in a "very considerable number of cases" of chronic purulent otitis media, chiselled open the mastoid and removed the osseous septum between the external meatus and the antrum. He has then inserted a metal tube in the opening thus made, and (by gradual shortening) has allowed the cavity to fill from the bottom with dense fibrous tissue. The tympanum was also emptied of its contents, and every trace of the membrane entirely removed. Careful cleansing, the use of an antiseptic instillation, and the insertion of a cotton-wool plug, or Ward Cousins' artificial drum, constitute the subsequent daily toilet of the ear operated on. [Mr. Lane has undoubtedly shown the feasibility of this operation in ordinarily skilled hands, but the indications are very meagrely described. We trust that few aural surgeons have on their hands any "very considerable number of cases" justifying this somewhat severe, though scientific, radical treatment.]
Dundas Grant.

ASSOCIATION MEETINGS.

THE PARIS SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

Meetings, March and April, 1892.

Non-Traumatic Deviations of the Nasal Septum.—Classification.—Embryology. General Rules for Treatment. By DR. HENRI CHATELLIER.

From the study of sections of nasal fossæ in human embryos of three to four months' gestation, the author has determined that ossification has commenced in the vomer, upper and inferior maxillæ, and the middle and inferior turbinates, the ethmoid being at that time completely cartilaginous. The perpendicular plate at its centre presents a considerable thinning; *this is then its weak spot*. The quadrangular cartilage is prolonged in front of the perpendicular plate, and is insinuated like it between the two laminae of the vomer. The latter is formed by a body of small height; and at its upper border it is divided into two laminae, which separate to form an open antero-posterior furrow above, in which is placed the inferior edge of the perpendicular plate and of the quadrangular cartilage. The septum may then be considered to be constituted by two segments; the upper one formed by the perpendicular plate and the quadrangular cartilage, the lower one by the vomer. These two segments are united to form the ethmoido-chondro-vomerine articulation, the means of union being the

connective tissue covering the furrow of the vomer. *This articulation is the second weak spot of the septum.*

The inferior wall of the nasal fossæ is formed by the palatine apophyses, of which the two upper and inferior laminae, not yet joined to each other, advance towards the middle line in front of their congeners of the opposite side. But the right and left osseous plates are not yet in contact. Between them there exists a space, filled with connective tissue, on which rests the inferior edge of the vomer. This point is the weak spot of the osseous walls of the nasal fossæ.

Remembering that the perpendicular plate and the quadrangular cartilage are developed from the median bud of the face and the upper maxillæ and their palatine apophyses from the lateral buds, this difference of origin is not without influence on the later development. Whatever causes modify the parallel development of the septum (median bud) and the lateral walls of the nasal fossæ (lateral buds), we may conceive that in certain cases the *septum may be too long for a cavity the vertical dimensions of which are proportionally too small*. The septum will therefore be obliged to be outside the cavity which encloses it, or must diminish in length.

1. *The septum projects from the nasal fossæ.*—The septum, too long, presses above (A) and below (E). But above we know that the upper border of the perpendicular plate is strongly compressed into the base of the skull, and that below is a weak point (E). It is effectively at this point that the septum is insinuated between the palatine apophyses and makes at the vault of the pharynx an antero-posterior projection, which old authors considered to be a sign of hereditary syphilis. This hernia of the inferior edge of the septum is then, compensatory for its vertical dimensions, too large for the cavity which encloses it.

2. *The septum is diminished in length.*—The vertical dimensions of the septum are too great, but the walls of the nasal fossæ everywhere are resistant. In order to be properly lodged it is necessarily diminished in length. Two processes conduce to this result :—

(a) The septum is buried in itself, and *gains in thickness* what it loses in length, thus diminishing in calibre one or both nasal fossæ.

(b) The septum is *incurved*, making a projection into the nasal fossa and diminishing its transverse diameter, the fossa of the opposite side being increased proportionately. This is deviation without thickening. We know that the perpendicular plate of the ethmoid is strongly joined to the base of the skull, and that at its centre it presents a notable thinness, that its inferior border articulates with the vomer by a zone of connective tissue, that the inferior edge of the vomer also articulates with the palatine apophyses by means of connective tissue when deviation is produced, the upper edge of the perpendicular plate is fixed, an angle of curvature is made at the level of the thinning of the perpendicular plate (B), a compensatory curvature is produced at the ethmoido-chondro-vomerine articulation: the vomer itself participates in the displacement, either by lateral projection of its articular plates (V), or, more rarely, by obliquity of the whole bone, the movement passing into the vomero-palatine articulation (E). Thus is constituted the deviation, the projecting angle of which, oblique in front and behind, and from above below, is formed by the articulation of the perpendicular plate and the quadrangular cartilage on the one hand, and the upper border of the vomer on the other hand.

In this variety there is a diminution of the transverse diameter of the nasal fossa where the projection exists, and proportional increase of the other fossa.

Certain patients present a deviation complicated with thickening.

The feeble points of the septum have their minimum of resistance in the fetus; they become more rigid as ossification and suturing of the bones occurs, but they preserve a diminished resistance through life.

Five schematic figures appended by the author will easily make comprehensible the state of the normal and abnormal septum.

Treatment.—Abnormal septa become pathological only when they cause difficulty of passage of air during respiration. In practice all the varieties referred to previously may be reduced to two.

1. Thickened septum.

2. Incurved septum, but the resection of the projecting portion would cause an orifice of communication between the two nasal fossae.

1. The thickening will be dissipated by numerous methods (electrolysis, cutting forceps, chisels, Bosworth's saw).

Bosworth's operation is the best. It is easy, rapid, without danger, and whether the thickening be cartilaginous, osseous, or osseo-cartilaginous permits the desired end.

2. In incurvation without thickening the difficulty is greater, for every loss of substance of the septum, if the soft parts are not preserved, will be followed by perforation.

Compression gives no result, the too-long septum regaining its former curvature when the compressors are removed.

The indication is to diminish the vertical dimensions of the septum, respecting the soft parts. With this end in view, Dr. Chatellier, in 1887, devised and practised the following operation, which seems to have been forestalled by Petersen ("Berliner Klin. Woch.") in 1883, and Cholewa ("Monats. für Ohrenheilk.," Sept. 1891) seems to have re-discovered it. The operation is performed without enlarging the natural orifice of the nares. After cocainizing both sides of the septum, a first horizontal incision, preferably with a bistoury, is made parallel with the insertion of the septum in the floor, and a second incision, vertically, is made in the prominent part of the deviation—with a sharp instrument the mucous membrane, periosteum, and perichondrium are cut through together, thus exposing the whole part of the projection. The septal skeleton is then cut through to the under surface of the perichondrium of the opposite side, thus avoiding perforation of the mucous membrane of the opposite side, which is difficult when the curvature is sharp. Through this orifice the septum is separated from the integuments, then with chisel and punch the skeleton is resected as much as possible, thus removing the whole of the projecting portion. This part of the operation, easy when involving only the quadrangular cartilage, is much more difficult when the vomer or perpendicular plate of the ethmoid has to be resected. When all the obstruction is removed, it is only necessary to replace the mucous flaps side to side (periosteum against periosteum). An iodoform tampon suffices to maintain the parts in contact, and no suturing is necessary. The first tampons are removed at the end of forty-eight hours, the second after two days, boracic ointment being then employed. After the first tamponing the parts are already healed together without any perforation. The safeguards against this are better in this operation than in Krieg's, who removes the mucous membrane of the projecting side. The author has performed the operation five times with complete success. In a sixth case, where the curvature produced a very acute angle, a small perforation resulted.

In mixed cases (deviation with thickening) it will be necessary to determine if simple ablation of the thickening will give a sufficient passage, or if it will be necessary to have resource to Petersen's operation.

Critical Study on the Etiology of Deviations of the Septum, with Presentation of a Specimen. By Dr. POTIQUET.

From observations upon the living subject and the cadaver, it is true, as Schech remarks, that a straight and symmetrical septum in man, at least the European, is quite the exception.

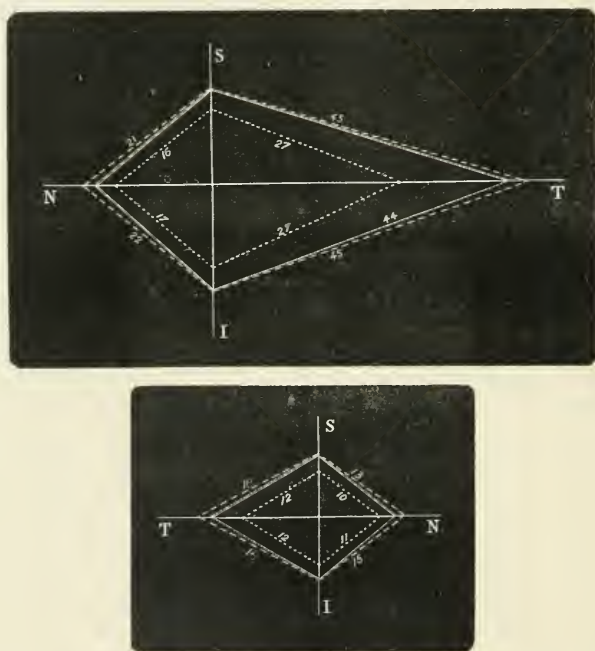
The author discusses critically the various theories which have been propounded — development of the septum among bones which circumscribe it, pressure, traumatism, lying on the same side always, the use of the handkerchief, pressure from hypertrophied turbinates, syphilis, scrofula, adenoids, rachitism, exostoses of the septum and organ of Jacobson, prolonged obstruction from paralysis of the dilators of the nose, etc.—and believes that the defect of harmony between the development of the septum and that of its osseous environment is at the root of the matter. It is by comparative anatomy and the study of the conditions to which the septum is subjected in its growth that we must look for elucidation of the question. This lateral incurvation, more marked in man than woman, in superior than inferior races, oftenest absent in anthropoids, appears to be a fact of evolution.

Ecker demonstrated that under the influence of growth of the cerebral mass the schema formed, according to the theory of Oken, by the cranial vertebræ tends to incurve the more in the antero-posterior sense as one rises in the scale of mammals, attaining its maximum of inflection in the European. Lissauer proved that this movement of inflection continues in man from birth to adult age, and that in the same race and in subjects of the same sex it may vary in amplitude and reach a greater or less degree according to the subject. This movement of inflection is expressed by a growth of the superior maxilla proportionally much greater in the vertical than in the transverse plane. Comparing the relative dimensions of this bone in the new-born and the adult, would not lateral incurvation of the nasal septum proceed in part from the difficulty, probably variable according to the individual, which the cartilaginous lamina may find in accommodating itself to the movement of antero-posterior inflection, varying in different subjects, which the cranio-facial axis submits to from birth to adult age? Researches undertaken at the museum and amphitheatre of the hospital would lead to this conclusion, which the author promises to elucidate in a succeeding publication.

Dr. GELLÉ reported a case of *Hemi-Anæsthesia of the Face, Head, and Organs of Sense in the course of Otorrhæa.*

A man, aged twenty-one, a young soldier, had articular rheumatism at nineteen, and two months afterwards (September, 1888) perceived rapid diminution of hearing, and two or three days after noticed a discharge from the left ear. After a short time all disappeared, but about every month a discharge appeared, lasting five to six days. In November, 1890, there was acute pain in the left ear and fresh suppuration. Three injections of warm boric water were given by Dr. Roy. A week afterwards, after three injections, the patient fancied he saw a veil before the left eye, the left ear becoming the seat of great pain. He at the same time noticed that he felt nothing over the whole of the left side of the face, head, and neck. Vision became gradually enfeebled in the left eye, and Dr. Roy stated complete hemi-anæsthesia of the left side of the face. Tactile, thermic and cold sensation were abolished over the whole of the left side of the head and neck as far as the clavicle. The left side of the tongue, cheeks and lips was insensible, also the anterior faucial pillar, the pharynx and arch of the palate. The functions of the right side were intact. Anæsthesia existed in the left naris, and sensibility

was impaired also on the right side, and also in the left cornea. Complete insensibility of the ocular and palpebral conjunctiva existed. The pupil reacted well to light, but remained a little dilated. On the left side taste was abolished, and smell (tobacco and iodoform) lost on the left side. Acuity of vision was diminished below one-tenth, the patient having a vague notion of the contour of objects, and being able to distinguish with trouble the five fingers of the hand held close. Examination of the visual field gave the following results.



It is restricted on the left side just as in hysterical anaesthetics. The right eye was normal. Ophthalmoscopically the papilla and fundus were normal. There was no vaso-motor disturbance. The left side of the mouth and nares were dry. No trouble in masticating; frontal headache; no motor lesion of the face or arch of the palate. Over the rest of the body sensation and movement normal, abdominal and cremaster reflexes normal, but patellar reflexes greatly diminished on both sides.

Examination of the ear: Greenish purulent discharge, large tympanic perforation, insensibility of the auditory passages.

Treatment: Warm boracic irrigations and iodoform insufflations.

The hemi-anaesthesia decreased as the otorrhoea diminished, and on the twentieth day of treatment the patient was discharged cured of all symptoms.

There was no disturbance of equilibrium or vertigo. The labyrinth was not evidently the part affected. The part played by the suppurative otitis is incontestable, and perhaps it was an affection of the middle ear.

As the onset of the affection coincided with the application of irrigations, it is possible that these caused, through a softened and perforated tympanum, a traumatic shock to the tympanic plexus.

Moos recorded a similar case ("Arch. of Ophth. and Otol.," 1875, pp. 102-107.)

Cannot an accident, analogous to those described under the name hysterotraumatism, be imagined? It is an inhibitory action which would be produced. The anaesthesia went beyond the extent of the limits of innervation of the trigeminal. Roy regarded this as characteristic of the hysterical nervous condition. Urbantschitsch admits the influence of irritations of the trigeminal in the genesis of these sensory affections, and similar effects have been observed by rhinologists and ophthalmologists.

The neuralgia which followed shows in these cases that the trigeminal was affected. In his work on facial paralysis, Dr. Gellé has insisted on the association of otitis, neuralgias, and paralyses of the face. The same irritation can be the point of departure of an excitation or an inhibition (Brown-Séquard).

Berger has published a case of hemi-anaesthesia in otorrhœa. Robin, in his thesis, has concluded that affections of innervation occur in one-seventh of these cases. These nervous symptoms in otorrhœa may announce complications more grave on the part of the meninges, brain and vessels, and observation shows how these symptoms may progress very insidiously. Examination of the eye has been recommended by Knapp, Moos, Kipp, Zaufal, Calmettes, Galezowsky, and Wreden, as a means of solving this difficult diagnostic problem. Moos saw a transitory hemiopia with Ménière's vertigo in a case of suppurative otitis with perforation. Hack, Berger, &c., have observed similar phenomena in affections of the nasal fossæ and sinuses.

In this case, from the absence of lesions of the fundus, from the form of contraction of the visual field, the extensive hemi-anaesthesia of the sense organs, passing beyond the limit of the trigeminal, and from the rapidity of cure, it may be concluded that the nervous complication was of purely reflex character.

Dr. Gellé had (in 1876) a case similar to Dr. Roy's, viz., that of a young man, with suppurative otitis for five weeks, opening spontaneously ten days before observation. Along with severe frontal cephalalgia, there was hyperæsthesia and neuralgia of half the face and all the left side of the body. The tympanum was perforated, and painful and full of bleeding vegetations.

A third case is cited of a man who had shot himself through the right ear with a revolver, and a large perforation of the antero-inferior third of the tympanum and suppurative otitis followed. There was no affection of the middle ear. Complete right facial paralysis resulted, and left hemiplegia with contraction. The pistol ball was supposed to have penetrated the skull, but at the autopsy nothing could be found of it. The left hemiplegia was doubtless of hysterotraumatic nature, the facial paralysis due to the wounding of the right ear. There was some power of hearing left in the right ear, and this, and the preservation of the upper third of the tympanum and of the ossicles, made Dr. Gellé disbelieve that the ball had penetrated the intra-cranial cavity. The ear was the point of origin of numerous reflexes.

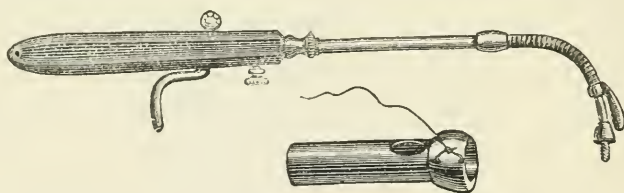
Prognosis ought to be guarded, bearing in mind that Matthewson, of Brooklyn, found an abscess of the cerebellum many months after the apparent cure of an otorrhœa with nervous symptoms.

Dr. LICHTWITZ read a paper on *Extirpation per vias naturales of Multiple Papilloma of the Larynx in a Child, by a New Method. Intubation with a Fenestrated Tube.*

All laryngologists know the difficulties experienced in operating on children, and though with patience they may be seen laryngoscopically, endo-laryngeal extirpation is oftenest met with insurmountable obstacles, either from indocility, pendant epiglottis or narrowness of the vocal organ, and stenosis, and cocaine is

dangerous. There are very few cases recorded in which papilloma have been removed from children under twelve years of age *per vias naturales*, but many of laryngo-fissure. This is far from being devoid of danger, in spite of Hopmann's seventeen favourable cases. Hoffa's statistics of one hundred and four cases of laryngo-fissure prove that, before performing laryngo-fissure, every effort should be made to remove the growth endo-laryngeally. In multiple papillomata, opening the larynx has not even the effect of allowing complete removal and avoiding recurrence. Laryngo-fissure has often had to be performed a second time (Hopmann), or recurrent papillomata have to be removed endo-laryngeally (Bornemann). The results as to phonation are certainly less favourable with laryngo-fissure than by the endo-laryngeal method. Thyrotomy is practised for papilloma in the child, only in default of a better method.

In a little girl with laryngeal papillomata, the author endeavoured to remove the papillomata by the endo-laryngeal method, but his efforts remained fruitless until the idea occurred to him of employing a modified *intubation with a fenestrated tube*. With this method, he further believes, that many cases of benign growths in the larynx may, in the child, be operated on endo-laryngeally, where thyrotomy would be employed. The exact situation of the growth must be determined laryngoscopically. *An intubation tube, pierced with a fenestrum, situated exactly over the tumour, so that the latter will project into the tube*, is then employed. (See figures: the applicator one-third natural size, the tube three-quarters natural size.)



Having inserted a tube, of dimensions corresponding to the age of the child, examination with the laryngoscope is made to determine if the neoplasm appears in the fenestrum of the tube. A suitable forceps, curette, snare, porte-caustique, or other instrument is then introduced into the tube, under guidance of the finger, and the growth is removed. In children of tender age it is important to use tubes cylindrical and with thin walls, and not flattened and thick-walled tubes, the former having a greater lumen, and more easily permitting the introduction of laryngeal instruments. Experiments on the cadaver show that the upper projecting edge of the tube rests on the ventricular bands, which prevent its falling into the trachea, the neck of the tube corresponding to the level of the vocal cords. For growths of the vocal cords, the fenestrum ought to be cut with its centre immediately above the thick border of the tube, and lower down for sub-glottic tumours. For growths of the ventricular bands it is necessary to make a notch in the projecting edge, or, better still, to slightly withdraw the tube by the thread attached to it, and to make the fenestrum below this.

According as the growth is in the anterior commissure, or to the left or right, the fenestrum will be arranged accordingly. As innocent growths are almost always implanted in the anterior portions of the larynx, tubes with fenestra directed backwards will rarely be necessary. In order to facilitate laryngoscopic examination, the tubes are blackened internally. While laryngoscopic examination is impossible after intubation, it is impossible to hurt by making efforts to extract the growths. It may, however, be necessary to introduce a tube with larger

fenestrum. Such is the procedure which Dr. Lichtwitz employed in one case where laryngo-fissure would otherwise have been inevitable. The case was that of a child of five and a half years, with crises of suffocation, stridor, and aphonia, due to a flap-like growth situated at the anterior commissure, carried up against the epiglottis during strong expiration, and into the sub-glottic space during inspiration. With slight cocainization, efforts were made unsuccessfully to extract the growth with laryngeal forceps, and, though it was partly seized by a cold snare, it could not be extracted. Constant efforts were made for three weeks, during which time it was observed that two-thirds of the larynx anteriorly and the sub-glottic space were covered with cauliflower-like papillomata. A trial was made, as recommended by Ranke¹ and Baldwin,² to obtain disappearance of the growths by pressure of an intubation tube. A tube was introduced every other day for a month. The child could only bear its presence for fifteen to thirty minutes. Although many fragments of papilloma were expelled, the growths did not diminish in volume, and the dyspnoea increased. The introduction of a fenestrated tube with a slit of five millimètres diameter allowed numerous fragments to be removed with Schroetter's forceps and Heymann's curette, and in five successive sittings all the growths were thus removed, and the larynx was cauterized with Schroetter's porte-caustique, holding nitrate of silver. The child was then perfectly well, and in February, 1892, was found to have no growths left or signs of recurrence.

The method acts more promptly than the simple endo-laryngeal method, is quite harmless, the tube protecting the healthy parts of the larynx, and it permits of the extraction of sub-glottic growths by preventing the movements of the vocal cords. It will be also useful for sub-glottic growths in the adult. In chronic stenosis of the larynx, with these tubes it will be easy to combine dilatation with section of the cicatricial membrane, through the fenestrum; also for electrolysis, curettement, etc. Tubes with thin walls will be necessary.

THE FRENCH SOCIETY OF LARYNGOLOGY AND OTOTOLOGY.

Annual Meeting, May 2, 1892.

President—Dr. MOURE.

Committee—MM. CHARAZAC, GAREL, JOAL, JOLY, LACONNET, LANNOIS, LAVRAND, MOURE, NOQUET, ROUGIER, and WAGNER.

Dr. MIOT was elected *President* for 1892; Drs. GAREL and CARTAZ, *Vice-Presidents*; Dr. CADIER, *Treasurer*; Dr. JOAL, *General Secretary*; and Dr. CHARAZAC, *Secretary*.

Dr. GAREL made a communication on *Two Cases of Lupus of the Larynx—one primary, the other secondary*.

Primary lupus is rare, and its diagnosis is based only upon direct examination of the larynx and the microscope. Five cases were observed by Ziemssen, Isambert, Haslund, Breda, and Obertüschen up to 1888, but only the latter had the diagnosis confirmed by the microscope. Since then Garel has only found one recorded case, viz., that of Garré—(*Lupus of the Entrance of the Larynx; Ablation by Sub-Hyoid Pharyngotomy*. "Beit. zur Klin. Ch. von Bruns," 1890).

¹ Ranke: "Münchener Med. Woch.," Nos. 28 and 29, 1889.

² Baldwin: "New York Med. Rec.," March 8, 1890.

Garel's case was that of a young woman of twenty-two, in apparently perfect health, without trace of tuberculosis or cutaneous affections in the family history. She had never had any scrofulous affection in childhood. In 1890 she began to cough, and had prickings in the throat, with mucous expectoration. This lasted for two months, and after that she frequently had blood-stained expectoration. The voice became hoarse, and coughing ceased, except at long intervals. There was no loss of flesh, fever, night sweats, or diarrhoea. About a year after she came to the hospital with slight cough and hoarseness, and laryngoscopically the epiglottis was found to be enlarged, pale grey, irregularly mammillated, and with a nodule as big as a small pea projecting from its free edge. The ary-epiglottic folds were enlarged, and more or less cylindrical, forming with the epiglottis a sort of crown, encircling the upper part of the larynx. These folds were pale grey and mammillated, the ventricular bands were the same, enlarged, and hiding the vocal cords very greatly. These were a little red, and their edges irregular. A greyish bud existed in the inter-arytenoid region. The patient was absolutely free from signs of tuberculosis. A portion of the epiglottic growth was excised and examined by M. Lacroix, who pronounced it to be lupus.

On the forearm two or three spots of *psoriasis guttata* were seen; small nodules slightly projecting, covered with whitish scales. But this was a very recent symptom. General tonic treatment and Fowler's liquor was given, and lactic acid (eighty per cent.) used locally, the galvano-cautery being applied to the epiglottis. The patient was improved but not cured, and has since had slight bronchitis and crises of suffocation, which are produced even by laryngoscopic examination.

Dr. Garel's second case, of secondary lupus of the larynx, concerned a young girl of seventeen, who began with lupus of the left cheek, followed by lupus of the larynx ten months after. She had a history of frequent coryzas in childhood, and lachrymation, photophobia and redness of the eyes. There had been no pulmonary affection. Laryngoscopically the left half of the larynx was found to be absolutely free, the epiglottis, the ventricular band and vocal cord being affected only on the right side. After galvano-caustic operation on the epiglottic tumour, erysipelas of the face followed. The epiglottis afterwards greatly improved in appearance, and the voice improved. Swabbings of lactic acid were also made, and whether the improvement was due to this or to erysipelas seems doubtful.

Dr. Moure also regarded primary erysipelas of the larynx as very rare. He recently reported to the Anatomical Society of Bordeaux a case in which the lupoid nodules showed microscopically epithelial degeneration, probably due to galvano-cauterization.

Dr. PAUL RAUGE read a paper on *The Rarity of Cortical Laryngeal Paralysis*.

It has been considered necessary to seek in the upper cerebral regions the nucleus for excitation of any laryngeal movement; but it is natural and satisfactory to localize in the medulla, by the side of other reflexes, purely organic, of which this organ is the ordinary centre, the origin of the highest and evidently psychological function, viz., the phonatory act, this primary and necessary element of articulation, which is only a transformation of an elementary laryngeal sound more intellectually differentiated.

The cause of misunderstanding is probably in an incomplete analysis of the laryngeal attributes, the fact having been neglected that the larynx is an apparatus with a twofold function, each of which, up to a certain point, is antagonistic; the one the mechanical act of respiration (dilation by the abductors), the other making the larynx the organ of phonation. If the first, like all the functions of vegetation, comes from the medulla, the conscient and voluntary nature of the second act suffices *à priori* to establish its cortical origin. The idea of seeking in the cerebral

convolutions for the phonatory centre properly belongs to Ferrier, who, however, vaguely conceived it, and it was Duret who in the following year gave this a definite form and experimental control. Neither, however, succeeded in establishing an autonomous and complete vocal centre, a region of the cortex alone controlling all the mechanical acts which constitute phonation. Both forgot that the glottic vibrations which constitute the voice require not only the putting into activity of the larynx but the collective intervention of at least two muscular acts; contraction of the glottis and conscient expiratory effect voluntary and rhythmical. Two associated but anatomically distinct centres ought to control these synergic acts. The merit due to Krause, Massini, Semon and Horsley was to separate the part played by the larynx, and in introducing into their experiments a rigorous method and precise experiment.

The little we know of this question of localization is derived from experiments upon animals. Pathology has done nothing to help it; only those cases exist which can be utilized to control the affirmations of pure physiology.

Logically, laryngeal paralyses of cerebral origin ought to be as frequent as common hemiplegias, and twice as common as motor aphasia, since there exists only one centre of Broca, and two laryngeal centres. But if the ideas of Semon and Horsley be accepted, of bilateral representation of those centres in the cerebral cortex, each behaving differently from other symmetrical psychico-motor centres in that the destruction of one leaves the other competent to preside over the laryngeal functions bilaterally, cerebral paralyses of the larynx would be not only an exception but a perfect impossibility, except in the extremely rare event of coincident lesions attacking both hemispheres. But a small number of facts, well observed and worthy of all credence (Garel, Déjerine) exists, in which hemiplegia of the larynx has undoubtedly arisen from a limited affection of the cortex. These observations are convincing in spite of the rather tenacious scepticism of Semon and Horsley, and they suffice to prove that unilateral affections of the laryngeal centre do not remain latent, but are expressed clinically by a hemiplegia of the opposite side of the glottis.

Semon's doctrine does not seem to be the true explanation of the paucity of clinical facts; the latter is really due to the particularly obscure conditions surrounding the phenomena, and the difficulty of observation of the patients under these circumstances.

Firstly, cortical paralyses are revealed only by vocal troubles, never by respiratory. These may exist unperceived more easily than other paralyses, because of their constant unilateral nature. The paralysis of one adductor is soon compensated for by the increased action of the healthy cord, and there is no aphonia, but simple dysphonia, determined by deficiency of tension of the paralysed cord. The lesion produced is not therefore a coarse one, but a slight one easily escaping notice.

When aphasia exists, the vocal trouble would be impossible to recognise but or one sign, *i.e.*, the mechanical disorder in the movements or attitude of the cords, and what the ear cannot detect the eye can see with the laryngoscope. That these cases are not oftener examined is due to the fact that they are rarely seen by the laryngologist, the state of the larynx being quite a minor consideration, and these patients find their way into the general medical wards, and, moreover, they lend themselves with difficulty to laryngoscopic examination. Suppose even the lesion is discovered, a complete autopsy would be absolutely necessary to confirm the diagnosis.

The discovery of a lesion of the cortex even exactly circumscribing the presumed seat of the laryngeal centre would not be sufficient, but it would be necessary to

determine that the motor trouble could not come from any other source (sub-cortical, internal capsule, peduncles, pons, the medulla, roots of the spinal accessory or vagus, laryngeal muscles, crico-arytenoid articulations, etc.). Such macroscopical and microscopical examination would have to be of the most thorough description.

Not until the day when the laryngoscope is applied to all hemiplegics (all aphasic-aphonic or not), and to all patients with cerebral affections, will facts be gathered to found solid bases for a chapter upon the nervous pathology, for which at present we can only apply to experimental physiology.

The author does not hesitate to affirm that the simple appearance of a motionless cord will give a clue to a diagnosis of the probable cortical seat of the lesion.

Lesions of the cerebral cortex leave the unconscious and continuous effort of dilatation unaffected; consequently the glottis is apparently normal in the state of repose. But when effort is made to voluntarily phonate, the affected cord remains passively in respiratory attitude, and cannot reach the cadaveric position. There is then absolute loss of movement of the cord, both in respiratory and vocal effort, not, however, resembling the position characterizing total glottic paralysis. It is wrong to speak of the "cadaveric position" in these cases.

The healthy cord, having an abnormal compensatory excursus, marks the degree of abduction of the affected cord. The glottis is, however, always oblique. During calm respiration the two cords remain quite symmetrical. This permanent fixation of one cord is not seen in bulbar paralyses, where there is, on the contrary, loss of abduction, nor in recurrent nerve paralyses, which produce the cadaveric position sometimes, or paralysis of the abductors (contraction of adductors of Krause).

There is one condition in which, as in lesions of the laryngeal centre, the cords are fixed in extreme abduction, with absolute powerlessness of abduction—viz., hysterical paralysis. But motor hysterical paralyses are always bilateral, while cortical (unless in lesion of both centres) are always hemiplegic. This unilateral condition is not absolutely distinctive of cortical laryngoplegias, since it may occur in lesions of the nerve trunks, or of the medulla, but it is presumptive evidence of a cerebral origin of the lesion.

Dr. LUC read a paper on *Sarcoma of the Tonsil—Difficulty of Histological Diagnosis*.

The patient was a man of fifty, in apparent good health, with a swelling of the left tonsil which had lasted a few months. This was also ulcerated. There was no syphilis and no glandular enlargement. A piece of the tonsil excised was microscopically examined and pronounced to be simply hypertrophy, specially characterized by the presence of abundance of lymphoid cells in the reticulum of the gland. The ulceration continuing, a second piece was microscopically examined, two months after, by another histologist, and pronounced to be the same as the first. Two months after this there was enlargement of the sub-maxillary glands of the left side, dysphagia, and lancinating pains. Dr. Gombaut examined a piece of the excised tonsil, and pronounced it to be small-celled sarcoma ("fuso-cellular," or it might be called "lympho-sarcoma").

If the histological examination could have determined the true nature of the case at an early period, it would have been right to operate; unfortunately, exact microscopic examination came too late.

Dr. LAVRAND contributed a paper on *Adenoid Tumours—Two Successive Recurrences in one Case, and one recurrence in another*.

In one case, in 1885, a few growths were removed from a child nine years of

age, and in 1887 the pharynx was nearly free of adenoids, and the child was cured of her asthmatic attacks, which before had been severe, and of her deafness, and breathed through the nose. At the end of 1888, the respiratory obstruction again occurred, and the naso-pharynx was again found to be full of adenoids. In 1889 these were removed under chloroform with forceps, the few remaining ones not being curetted. In 1891 the symptoms recurred, and there was an enormous crop of adenoids. The whole were curetted off, leaving not a trace of growth, and cure was this time successful.

The moral of this case is that the removal of most of the growths did not lead to atrophy of the rest.

In the second case—a boy of six—imperfect curettage was followed by recurrence within a few months, the whole naso-pharynx being filled with growths. A year after, they were all carefully removed, leaving no trace, and there has not been any recurrence.

The author insists upon the fact that removal of some adenoids does not guarantee atrophy of the rest of them, and that nothing short of thorough curetting will prevent recurrence.

Dr. VACHER read notes of *A rare Case of Ulceration of one Vocal Cord*.

In a young woman, twenty-seven years of age, the author found a punched-out ulceration at the insertion of the right vocal cord into the arytenoid, the cord appearing detached at its insertion. The importance of the case, however, is not in the nature of the ulceration—which could not be determined—but in the bearing upon the theory of the second register of the human voice, improperly called head voice or falsetto. The ulcer in the neighbourhood of the arytenoid produced aphonia for the first register, because the cords could not vibrate in all their length and thickness. When, by violent effort, the cords were brought together, in all their extent, the air escaped violently through the anterior one-third of the glottis, and produced the last sounds which the larynx of this patient could attain to.

The author thinks it would be well to collect all the cases in which the existence of some notes can be determined, in spite of complete aphonia, and it could thus be proved that the two registers of the voice are produced by the same factors, and that they differ only in the length of the vibrating parts.

Dr. POLO.—*The Spray in the Treatment of Diphtheria, with presentation of an apparatus.*

The apparatus consists of a lamp, a boiler to hold three litres of filtered water, communicating with two injecting tubes, a superposed basin to hold six litres of liquid, with two aspirating tubes fixed above to the injecting tubes. The apparatus will last in action for six hours, the basin being filled every two hours. About one and a half litres of sprayed liquid pass into the atmosphere an hour. The apparatus is placed sixty centimetres from the patient, who is protected as to the head, bedclothing and pillow and the bed being surrounded with a tent to concentrate the vapour round the child.

Carbolic acid, 3 to 5 per 1000, alternately with 10 per 1000 tincture of eucalyptus leaves, is employed by the author, and the apparatus is in use night and day.

Dr. CHARAZAC thought expensive apparatus were inapplicable to poor patients, and he employed Renou's method of evaporating carbolic acid in the room until signs of intoxication appeared.

Dr. DELIE read notes of a case of *Inter-Arytenoidean Fusio-Cellular Sarcoma—Operation per vias naturales—Cure lasting eight months—Recurrence—Tracheotomy.*

The patient was a man aged sixty-three, who for ten months had had some difficulty of deglutition, which increased until violent attacks of cough and suffocation made him afraid to eat. A red, smooth, round tumour, pedunculated, and situated on the mucous membrane between the two arytenoids was seen with the laryngoscope. It was easily removed with Fauvel's forceps, the slight hæmorrhage resulting being checked by ice. Microscopically it was found to be a fuso-cellular sarcoma. There was no infiltration of the surrounding parts, and the tumour was clearly limited. All the parts between the arytenoid cartilage were submitted to thorough galvano-caustic curettement. In a month the patient appeared to be perfectly cured, the inter-arytenoid space was cicatrized, eating and drinking were performed without difficulty, there was no pain, and the voice was fairly preserved.

This was in March, 1891. In November the voice was again lost, and difficulty in swallowing returned. There was now swelling of the whole arytenoid region and posterior part of the ventricular bands. On the œsophageal surface of the inter-arytenoid space was an irregular swelling, and pressure on the larynx was painful. There were no enlarged glands. The patient declined surgical operation. Since December the growth invaded the whole larynx and neighbouring parts, glandular enlargements in the neck followed, and in January, 1892, tracheotomy became necessary. An attack of influenza with pulmonary complications carried off the patient.

From this case the author concludes that—

1. A sarcoma may exist for a long time without causing any alarming symptoms or glandular infection.
2. Operation *per vias naturales* may be followed by cure lasting for some time.
3. Recurrence develops rapidly with severe lymphatic complications.

Dr. WAGNIER read a paper on *The Treatment of Naso-Pharyngeal Fibro-Myxomas*.

He recognised two kinds of fibro-myxomas—one in which the tumours are round, smooth, hard, and pedunculated, freely movable, causing only obstruction, but no pain or hæmorrhage, and seldom deafness.

This kind differs from true fibroma, with its great power of development, its tendency to hæmorrhages, and its almost exclusive predilection for the male sex, especially between the ages of eleven and twenty-five. Their base is not pedunculated, but large and fibrous—they spring from the basilar apophysis, while fibro-myxomas spring from about the posterior orifices of the nares. A second variety of fibro-myxomas resembles in structure and appearance the mucous polypi of the nose, springing oftenest from the middle turbinates.

The author employs by preference the metallic snare passed through the nose, and especially the modification of the galvano-caustic loop which he has already described. The loop, passed through the nose, is adjusted with the finger in the naso-pharynx. To avoid the difficulties frequently met with in adjusting the snare in this manner, the author has devised a method of reducing the volume of the growth to permit of its being seized in the cold or galvano-caustic loop. The method consists of pressing the growth towards the choanæ with the finger, and, if possible, causing it to enter the nasal fossæ, just as in reducing a hernia. This the author maintains diminishes the volume of the tumour, and it may be pressed back into the naso-pharynx, when the snare will easily encircle it. This method is less painful than attempts to adjust the snare with the finger. The author relates four illustrative cases.

Dr. ROUSSEAU read a paper *Concerning Operation for Adenoid Vegetations of the Nasal Pharynx.*

The author exhibited his electric curettes, which he has now used one hundred times. The instrument is rendered less flexible by using phosphorized bronze in place of copper, and the conducting wires are superimposed instead of being placed side by side. They are also more effectually isolated. The author has constructed a curette which can be used for young children. With these instruments the adenoids can be completely removed, the point of implantation being at the same time cauterized. Consecutive hæmorrhage is *nil*. The wire ought only to be heated to a dull red.

Cutting instruments give rise sometimes to severe hæmorrhage, from which tamponing of the nasal fossæ has sometimes been required. Fifteen such cases have been collected by the author and Dr. Cartaz.

As to septic or inflammatory complications, two cases of traumatic fever (Moldenhauer), a case of erysipelas of the face (C. Michel), a case of slight angina and cervical adenitis (Cartaz), and cases of middle ear inflammation, have been recorded. The pharynx is also the resting-place of numerous microbes, which require only a slight abrasion to produce suppuration and septic accidents. Cutting operations favour this complication. Why, asks the author, risk this, when a perfectly aseptic instrument (hot wire) not only destroys all the micro-organisms, but by producing an eschar, forms a barrier to their entrance into the subjacent parts? The fall of the eschar is not accompanied with hæmorrhage when a dull red heat is employed. Subsequent antiseptis is obtained by the use of antiseptic gargles and nasal sprays.

The author's conviction is that we shall never be free from the risk of complications until we remove adenoid growths by electricity, whether using his own, Capart's or Chatellier's instrument. He also thinks that electric methods are too little employed in rhinology, having an incontestable superiority over cutting operations.

Dr. MOURE asked if the author had never seen inflammation of the Eustachian tube after the use of these instruments?

Dr. ROUSSEAU replied that he had never seen it, because only a curette was employed to remove the median part of the vegetation, leaving the orifice of the tube protected by a small circle of adenoid tissue?

Dr. GAREL believed that an incomplete operation did not suffice to cure deafness, and operation was easier and more radical with Gottstein's curette.

Dr. SUAREZ DE MENDOZA asked if Dr. Rousseau examined the children to determine what amount of tissue was left round the Eustachian tube after the operation.

Dr. ROUSSEAU replied in the negative, stating that when they breathed through the nose they oftenest were definitely cured.

Dr. ROUGIER remarked that he operated with Wilde's snare by anterior rhinoscopy, using Moure's speculum or Zaufal's tube. The vegetation was thus easily enclosed in the loop, and all could be removed effectively, and without wounding the mucous membrane.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

The Fourteenth Annual Congress was held at Boston on June 20, 21, and 21.

THE following is a list of the papers read :—

Dr. SAJOUS—"The Present Status of the Treatment of Hay Fever."

Dr. BRYSON DELAVAN—"The Influence of certain Diathetic Conditions upon the Prognosis in Operations upon the Throat."

Dr. CHAPMAN—"Some Pathological Conditions of the Upper Air-Passages accompanying 'la Grippe' Attacks."

Dr. F. I. KNIGHT—"Pharyngo-Mycosis."

Dr. J. WRIGHT—"A Case of Carcinoma at the Base of the Tongue."

Dr. FLETCHER INGALS—"A Case of Cancer of the Tonsil treated by Lactic Acid."

Dr. BEVERLEY ROBINSON—"Report of some Cases of Membranous Sore Throat."

Dr. C. H. KNIGHT—"Intubation for Chronic Sub-Cordal Stenosis of the Larynx in a Boy Twelve Years of Age."

Dr. A. MAC COY—"Rare Forms of Laryngeal Growth."

Dr. H. L. SWAIN—"A Case of Tumour of the Larynx."

Dr. J. SOLIS-COHEN—"Two Cases of Laryngectomy for Malignant Disease."

Dr. C. C. RICE—"The Value of Sprays in the Treatment of Catarrhal Affections of the Upper Air-Passages."

Dr. C. E. BEAN—"Nasal Hydrorrhœa."

Dr. W. H. DALY—"An Eligible Method of Repairing a Broken Nose."

Dr. J. O. ROE—"The Correction of Deformity resulting from Abscess of the Nasal Septum."

Dr. T. A. DE BLOIS—"The After-Results of Nasal Cauterization."

Dr. D. R. RANKIN—"Diseases incident to the Frontal Sinus."

Dr. T. H. BRYAN—"A Case of Suppurating Ethmoiditis."

OFFICERS FOR 1891-2.

President—Dr. S. W. LANGMAID (Boston).

Vice-Presidents—Dr. MORRIS J. ASCH (New York), and Dr. SAMUEL JOHNSTON (Baltimore).

Secretary and Treasurer—Dr. C. H. KNIGHT (New York).

Librarian—Dr. T. R. FRENCH (Brooklyn).

Council—Dr. F. I. KNIGHT (Boston), Dr. BRYSON DELAVAN (New York), Dr. HARRISON ALLEN (Philadelphia), and Dr. W. C. GLASGOW (St. Louis).

AMERICAN PEDIATRIC ASSOCIATION.

Meeting, May 3, 1892.

KOPLIK (New York). *Forms of Diphtheria which simulate simple Angina.* "Med. Rec.," May 14, 1892.

Certain cases of apparently mild forms of angina were shown by bacteriological examination to be truly diphtheritic. He had found animal experimentation (the biological test) satisfactory.

Dr. CAILLE, in discussing Dr. Koplik's paper, said it was folly to try to discard clinical observations for bacteriological investigations. The main point was to decide at the bedside of the patient whether we had a case of diphtheria or not.

Dr. LOUIS FISCHER believed it was easy, with proper precautions, to make a diagnosis with the aid of certain trifling instruments, as, for example, a long toothed forceps, properly sterilized, and a few agar tubes. The tubes after being inoculated could be laid in the incubator after being carried about for a few hours. While waiting for the result of the examination he would use all symptomatic treatment to counteract any serious symptom, and put the child on expectant plan of treatment; this usually did not take more than about one-half or three-quarters of a day.

Dr. A. JACOBI insisted on isolation in all doubtful cases. He impressed upon his hearers that in many cases of angina a probe could be carried into the follicle, whereas in diphtheria this is not the case. He hoped that some method would be devised for rendering the bacillus of diphtheria as readily discoverable as that of tuberculosis.

Dundas Grant.

REVIEWS.

Pollatschek (Carlsbad).—*Die Therapeutischen Lieferungen des Jahres 1891. Ein Jahrbuch für Praktische Aerzte. 3te Jahrgang.* ("The Therapeutic Acquisitions of the Year 1891. An Annual for Practical Physicians.") Wiesbaden: J. Bergmann, 1892, 234 pp. Third year.

THIS year again the author gives a review of the German therapeutic papers published last year. Very complete attention is paid in some articles to the treatment of diphtheria, laryngeal tuberculosis, and the different medications recommended for laryngeal and nasal affections.

Michael.

Mikulicz (Breslau) and Michelson, T. (Königsberg).—*Atlas der Krankheiten der Mund und Rachenhöhle. Zweite Hälfte.* Berlin: Aug. Hirschwald, 1892. ("Atlas of the Diseases of the Mouth and Pharyngeal Cavity." Second Part. With thirty-one chromo-lithographic tables.)

IT is a matter to be regretted that one of the authors has not lived to see the completion of his work. Dr. Michelson, to whom we owe so much, is dead. It must have been a great source of satisfaction to him to see how

the first part of his work was received. The second part is not only as interesting, but as trustworthy and deserving of high commendation as the first. There can be no doubt whatever that the work will take a first place in literature.

Michael.

Atkinson.—*Sixth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania.* Harrisburg: Edwin K. Meyers, State Printer. 1891. Pp. 740.

A VALUABLE collection of information upon sanitary matters in this State, showing that our American *confrères* are as greatly alive to the importance of State sanitation as we in England. Several outbreaks and cases of diphtheria have been investigated. Thorough isolation of each case is insisted upon by Dr. Atkinson. In many instances decaying vegetation and foul drainage were found to be the origin of the disease. The spread of the disease by public funerals is also indicated, and remedy suggested. A great number of interesting and suggestive papers are contributed to the volume by various Health officers.

R. Norris Wolfenden.

Ball, M. V.—*Essentials of Bacteriology.* By M. V. Ball, M.D. Philadelphia: W. B. Saunders.

THE aim of the author has been to produce a concise treatise upon the practical bacteriology of *to-day*, chiefly for medical students, but we feel convinced the work will be of great service to many practitioners as well. That the object of the writer has been attained is saying little for such an excellent little work, and we have every confidence in recommending it to anyone desirous of obtaining a practical knowledge of the subject.

J. Macintyre.

Stewart, D. D., and Lawrence, E. S.—*Essentials of Medical Electricity.* By D. D. Stewart, M.D., and E. S. Lawrence, M.D. Philadelphia: W. B. Saunders.

THE authors of this compendium lay no claim to originality, and the work is strictly limited to medical electricity as opposed to surgical. It is right to say the work before us may be considered a fair reflex of what is to be found in the more elaborate treatises, and that in little space. All the same, portions of the work, such as those on physics, and particularly on the different generators, might be improved in a future edition. Less about "cells," or, at least, more about other means of producing currents, is what is wanted in our modern work. Transformers must in the near future simplify and help those who have currents for lighting at their disposal. The work is well written, however, and will be found useful to those wishing a ready guide to the apparatus and methods of using this agent in disease.

J. Macintyre.

Eisenberg, James (Vienna).—*Bacteriological Diagnosis.* Tabular Aids for Use in Practical Work. By James Eisenberg, Ph.D., M.D., Vienna. Translated and augmented by Norval H. Pierce, M.D. Philadelphia and London: The F. A. Davis Co.

THIS work has been well received in Germany, and is used in Prof. Cohn's laboratory. The tables have been published, so that the known specific differences of micro-organisms may be at our command. By means of this work all, or nearly all, the known micro-organisms may be identified.

As many bacteria cannot from their forms alone be distinguished, a work like this is of great importance. As far as is known, the place found, form and arrangement, motility, growth, temperature, rapidity of growth, spore formation, acrobiosis, gas production, gelatine reaction, aniline reaction, and pathogenesis, are described. Everyone engaged in bacteriological investigation will find this work of great value, and we are indebted to Dr. Pierce for placing it within the reach of English workers.

J. Macintyre.

Remondino.—The Mediterranean Shores of America. Southern California ; its Climatic, Physical, and Meteorological Conditions. By P. C. Remondino, M.D. The F. A. Davis Company, 1892.

THIS is a very useful and instructive book, dealing minutely with particulars as to the meteorology of these regions, and their suitability to the treatment of phthisis. The climate is remarkably equable, but no less than six classes of climate may be found within the boundaries of Southern California, none of which are moist, all being aseptic and dry, and stimulating. The mean spring temperature is 58°, autumn 62°, summer 68°, winter 54°. Exhaustive heated terms do not occur on this coast, and over a period of ten years there were only 93 days in which the temperature fell below 40°. It is never necessary to close houses to exclude heat or cold. The prevailing winds are from the west, but there are few storms. No enervating or steamy weather precedes, accompanies or follows the rains, the total amount of rainfall registered in an extreme season being, at San Diego, only 3.75 inches. There are few days on which the sun does not appear for some part of the day, and the climate appears to be most perfect and suitable for chest complaints. Laryngeal phthisis is said to do very well here, and so do cases with hæmoptysis. Extensive fibroid disease need never be despaired of. Evidently the climate of Southern California should be more recommended by physicians in Europe for phthisical complaints, and the author's book will be found to be a safe guide to the study of this important subject.

R. Norris Wolfenden.

Roosa, D. B. St. John. *A Practical Treatise on the Diseases of the Ear, including a Sketch of Aural Anatomy and Physiology.* Seventh Revised Edition. New York : William Wood and Company.

THE sixth edition of this classical work appeared in November, 1884, and it is no exaggeration to say that the publication of its successor has been awaited with impatient interest. English aurists, when asked what book they would recommend on the subject as containing all that the student could require, have long given a high, if not the highest, place to Roosa's treatise.

The historical account of the progress of otology as given here, is such as no aurist can afford to be without, and such as, we believe, is not to be found elsewhere. As a whole, the book is remarkable for the impartial tone in which all moot points are discussed, and for the temperate though decided manner in which the author's opinions are expressed. These opinions have been honestly submitted to the test of his increased experience, and it is a creditable characteristic of the author that he has

not hesitated to modify those which clinical observation has shown to be less tenable than analogy or theory seemed to justify him in assuming. Thus he deprecates any attempt to diagnosticate disease of the labyrinth by means of electricity, and he considers that cures of "nerve-deafness" by means of that agent are the outcome of inexact observation. In this edition the writer confines himself to one single method of employing the tuning-fork, which amounts to relying "upon the statements of the patient as to whether the tuning-fork is heard more distinctly and for a longer time when its vibrations are conducted through the air, or through the bones of the head" (p. 53). He believes "it is a rule without exception that, when the tuning-fork C is heard louder and longer through the bones than through the air, the predominant disease is one of the external or middle ear" (p. 353). The converse is, of course, not advanced as true, because "there may be predominant disease of the middle ear when through any cause—wax in the canal, mucus, blood, serum, or pus in the tympanum—abnormal pressure is made upon the peri- and endo-lymph, and yet the tuning-fork be heard better through the air" (p. 353).

In the latter case judgment has to be reserved till the result of further examination and treatment has been observed. It would, at present, be difficult to say that this does not include all that is practically useful in tuning-fork examinations, but the reader who finds his way to the section on the diagnosis of diseases of the labyrinth and acoustic nerve will find the discussion of the subject considerably amplified. Here he quotes freely from J. B. Ewerson's investigations on the ratio of bone to air-conduction in normal subjects. "The average duration is twice as long through the air as it is through the bone." It appears to us that this varies with different forks, and that it is necessary for the observer to work out on normal people the ratio peculiar to any particular fork before he makes use of it clinically. Strangely enough, the name of Rinne is not mentioned in connection with the tuning-fork until the discussion on labyrinthine disease, and there the name is mis-spelt "Renne," although the only method of using the fork which Roosa recommends is the one published by Rinne so long as nearly forty years ago ("Prag. Vierteljahressch.," 1885), according to Dench ("New York Med. Journ., Sept. 26, 1891). The author hardly succeeds in conveying the fact that for the predominance of air- over bone-conduction to be pathognomic of nerve deafness, it is necessary that there should be a considerable lowering of the hearing-power for both—according to Lucae, whispering should not be audible at the distance of a metre. The symptoms by which, in a case of deafness, he diagnosticates disease of the internal ear, as distinguished from disease of the middle ear, are thus tabulated:—

1. *Tuning-fork C² is heard better through the air (than through the bones).*
2. *Hearing is better in a quiet place.*
3. *Conversation is heard relatively better than a watch.*
4. *Noise is annoying to a more marked degree than is usual to people who hear well, or to those who are deaf from disease of the middle ear.*
5. *Inflation of the tympanum renders the hearing worse.*

Middle-ear disease is, on the other hand, indicated by :—

1. Better conduction of sounds through the bone than through the air.
 2. Capability of hearing better in a noise than in a quiet place.
- &c., &c.

The question of "hearing better in a noise" is carefully discriminated from that of deafness produced by long exposure to noises. The latter is due to labyrinthine nerve disease, and those affected by it—boiler-makers, for instance—do *not* hear better in a noise ; on the contrary, they hear worse than in a quiet place. "The fact that most patients suffering from "disease of the middle-ear[bilateral—ED.] hear better in a noise, especially "that of a railway car, I find as a result of a series of examinations extending over many years, and embracing several hundreds of cases." The latter class of patients hear well in the midst of a din in which boiler-makers and normal-hearing persons are almost deafened. It is interesting to note that Roosa has observed recovery of hearing in cases in which this symptom was present, and that the hopeless prognosis attached to it by older writers is unfounded. When it exists as a symptom of sclerosis of the middle ear—as it so often does—the prognosis is of course that of the disease. "The proximate cause is not as yet "positively known. It is probably to be found in some change in the "action of the articulations of the ossicula auditûs."

An endeavour is made to show that the deafness or deaf-mutism following cerebro-spinal meningitis is due to a lesion of the middle and not of the internal ear. Roosa founds this opinion on the examination of a large number of living deaf-mutes. Out of one hundred and forty-seven cases twenty-seven (fifty-four ears) were attributed to cerebro-spinal meningitis. In all there was some evidence of middle-ear disease on inspection of the membrane. Bone-conduction was preserved in thirty-four of the ears. There were only eight out of the fifty-four in which it could be conjectured that the nerve alone was affected. He does not adduce *post-mortem* observations and accepts without cavil the diagnosis of cerebro-spinal meningitis. The figures adduced are certainly very striking. On the strength of these observations he inculcates more purposive and vigorous treatment of the middle ear in cases of meningitis.

Among the *questiones vexatæ* at present before the profession, that of the value of operations on the nose for aural disease is one of the most important. Roosa founds upon the fact of many patients suffering from nasal occlusion from various causes without presenting an aural symptom that "it is not reasonable to conclude, therefore, that because a patient "has chronic disease of the tympanum and at the same time nasal "obstruction, that the latter is necessarily the cause of the aural disease" (p. 397). We agree with the premiss, but we feel sure we are not alone in believing that in the circumstances mentioned it would be equally true to modify the inference by adding the words "though probably" after the word "necessarily." If a large number of cases of nasal obstruction are taken it will be found that a notable percentage of them have aural disturbance, and that conversely a large proportion of cases of aural catarrh are associated with nasal obstruction. Moreover, all rhinologists have seen cases in which the simple removal of nasal polypi or of a

septal outgrowth has been followed by an unexpected improvement in ears which the patient has looked upon as past redemption, and has therefore not complained of. We quite agree with him that such operations should not be rashly undertaken, because as he truly says, "operations upon the nose, even when performed under pressing indications, are not without danger to the integrity of the ear, from an extension of the inflammation, caused by the operations, to the tympanum" (p. 398). Such lamentable results are not to be denied, but they are in many cases brought about by injudicious after-treatment, and we are sure improvement in this respect will be followed by better results. Every operator on the nose, also, should be sufficient of an aurist to recognise and treat an acute otitis at its onset. With Dr. Roosa we protest against the indiscriminate removal of nasal obstructions for aural disease in general. The cases must be judiciously selected, and labyrinthine disease and tympanic sclerosis carefully excluded. "When rhinologists have acquired a larger experience in diseases of the ear, they will not be so confident, as some of them now are, of curing chronic aural disease by removal of nasal stenosis" (p. 398).

The review of the different operations on the drum-head and ossicles recommended and practised from time to time for the relief of chronic non-suppurative inflammation of the middle ear will be found most interesting. Dr. Roosa describes them, however, as what *not* to do, and states that after a large experience of them all he has "given up all operations upon the drum membrane or upon the tendon of the tensor tympani in chronic non-suppurative cases, when there is no suspicion of retained mucus in the tympanic cavity" (p. 435). This exception is a tribute to the teaching of the late Mr. Hinton, and we could have wished some clearer indication for its adoption. Roosa seems recently to have been impressed with the results claimed by Sexton and Burnett for operations in chronic cases, but he asks for more experience of them before accepting them as therapeutic resources in the face of the failures on the same lines of our best men. In chronic *suppurative* cases the adoption of such measures he considers a sound surgical procedure.

The surgery of mastoid abscess is described from its first origin and the indications are well discussed. His conclusions, so far as they can be formulated and subject to variation in particular cases, are the following:—

"I. The integument and periosteum of the mastoid process should be freely divided in all cases when there is great pain, tenderness and swelling in this part.

"II. Such an incision should also be made whenever severe pain, referred to the middle ear, constantly exists, and which is not even temporarily relieved by the use of leeches, poultices, the warm douche, and so forth.

"III. The bone should be thoroughly examined by the aid of such an incision whenever we have good ground for suspecting that the bone is diseased or pus is retained in this part.

"IV. The mastoid process should be perforated after such an incision whenever the bone is found softened, and if a fistulous opening is

"discovered this should be enlarged. It should also be perforated when the suppuration of the middle ear involves the mastoid cells or antrum to such an extent that thorough drainage cannot be secured through the membrana tympani or external auditory canal."

He strongly deprecates opening the mastoid process if general septicæmia or pyæmia has set in. No reference is made to such operations as the ligation of the internal jugular and irrigation of the sinus. He quotes cases of recovery from septicæmia which would seem, on the other hand, to encourage perseverance in local as well as general treatment. Intra-cranial complications are enumerated, and the variability of their symptoms is illustrated by a list of cases. Little attempt has been made to construct formulæ for the diagnosis between them, and in this respect tradition has possibly been sacrificed for the sake of clinical truth. The student may derive more intellectual satisfaction from the study of Barker's masterly analysis of the subject in his Hunterian Lectures, but he will read them with greater benefit after an examination of the separately recorded cases given in Roosa's tables.

No doubt since the manuscript of this work left the writer's hands many communications of value have been placed before the profession, of which we would gladly have Dr. Roosa's opinion. It is obvious, however, that Dr. Roosa's opinions are not hastily formed. His opinions may, therefore, be recommended to the learner as affording safe guides for action, and to the learned as deserving of that respect which well-weighed and honest arguments will always command.

There are here and there a few errors in the correction of the proofs. As a rule they are unimportant, but the substitution of "grains" for "grams," on page 119, line 28, would probably be desirable. Again, in the description of Fig. 73, "petro-staphylinus" should surely have been "spheno-staphylinus" in the interest of the zealous anatomist.

The book has great literary charm. It is absolutely free from the dryness which is so characteristic of works on otology, large as well as small. The quaint verbal illustrations catch the attention and relieve the unavoidable coldness of the matter, and the crispness of the higher class trans-Atlantic diction makes the study of the book refreshing as well as profitable.

Dundas Grant.

Correspondence.

VOICE TRAINING.

*To the Editors of THE JOURNAL OF LARYNGOLOGY, RHINOLOGY,
AND OTOTOLOGY.*

SIRS,—Reserving further and more detailed consideration of the conclusions of Dr. Joal upon the mechanism of respiration in singers for another occasion, I would ask permission to say a few words on the review of his papers which appears in the current number of the Journal,

more especially since, as President of the British Laryngological Association, I took a leading part "in the discussion upon the same subject," which has admittedly a share in the inspiration of the article.

I desire to protest against the statement that "there are three generally recognised types of breathing for those who use the voice," *of which the superior costal or clavicular is one*; for I am not aware of any author or of any teacher who advocates this method, which, to quote Morell Mackenzie, "is seldom brought into play except in the dire struggle for breath when suffocation is impending."

I also venture to deprecate the division of abdominal and of costal respiration into two separate types. The diaphragm is acknowledged by all physiologists to be the most powerful muscle of respiration, and must be the first employed for expanding the chest; but, as stated by me in the discussion referred to,¹ *the descent of the diaphragm must of necessity be followed up by costal extension*. This has always been taught in the writings associated with my name,² and enforced so frequently that I have even felt it necessary to apologize for its constant reiteration, which, however, does not appear to have had the effect of preventing misapprehension.

It is true that the middle type of breathing, which also brings into play the intercostal muscles, can be employed without descent of the diaphragm; but, as I pointed out in the discussion, while in the method of breathing commenced by depression of the diaphragm and extended to rib breathing the fault of elevation of the clavicle is barely suggested, breathing commenced by costal extension is very apt to lead, and almost always does lead, to elevation of the clavicle.

I have, therefore, always advocated the *full use* of the ordinary breathing muscles, viz., the diaphragm and the intercostals, and have opposed the calling into play of the extraordinary breathing muscles required for *forced* respiration, viz., those which are instrumental in the elevation of the clavicle; and "my withers are unwrung" by any insinuation that I preach "the pernicious doctrine of exaggerated descent of the diaphragm."

With regard to Mandl, against whose teaching Dr. Joal avowedly argues, I fear it must be admitted that he advocated diaphragmatic breathing exclusively, notwithstanding that it is physiologically impossible to use the diaphragm uncombined with rib expansion. But that even he had his doubts on this subject may be seen from the following remarks on page 11 of the second edition of his "Hygiène de la Voix" (Paris, 1879): "Ces divers types respiratoires peuvent se combiner ou plutôt se succéder les uns aux autres. Ceci s'observe bien dans la respiration latérale, qui se combine soit avec l'abdominale, soit avec la claviculaire. En effet, toute inspiration diaphragmatique profonde peut finir par une inspiration latérale, de même que l'inspiration latérale exagérée se termine le plus souvent par une inspiration claviculaire."

¹ Journal of Laryngology, May, 1892, page 226.

² "The combined forms of midriff and of rib breathing constitute the right way, and collar bone breathing is totally wrong and vicious, and should not, in a state of health, be made use of under any circumstances." - *Voix, Song and Speech*, Thirteenth Edition, page 133. London, 1892.

But supposing that this qualification of Mandl is regarded as insufficient, and that he is conclusively proved to have been in the wrong, it would only show that the "eminent teachers" referred to in the Journal who advocate diaphragmatic breathing are not by any means doing so "in blind advocacy of Mandl's doctrines"; for, so far as I am informed, everyone who in the present day teaches it insists that in abdominal breathing descent of the diaphragm should be followed by full lateral extension of the ribs. And so, after all, the "fashionable" method of even the "lay teachers" of nowadays is not only not "pernicious," but is more in accordance with physiology and common sense than that of those presumably possessed of "knowledge of anatomy and physiology," who would separate the act of inspiration for the purposes of singing into "types" not observed by nature for the ordinary purposes of life.

Yours, &c.,

Mansfield Street, London,

LENNOX BROWNE.

June 23rd, 1892.

[Mr. Browne's protest against the statement that there are three generally recognised types of breathing for those who use the voice, and his concluding remarks on those who may be "possessed of knowledge of anatomy and physiology," who separate the act of inspiration into types, are a little beside the mark.

If there had not been a method of inflating the chest in its upper regions so distinctive as to represent a "type," why did Mandl so seriously—and others since him, including Mr. Browne—inveigh against this method or "type"? Mandl's doctrine of diaphragmatic breathing is sufficiently distinctive to be a "type." There is nothing unscientific in the use of the term "type," indeed it is just the opposite. That he is unaware of any author or teacher who advocates this method is unfortunate. Will he be interested to know that there are teachers still who favour this method (Batiste, Bonheur, Cheval, Dally, Laget, Hamonie, &c.), and singers who employ it? Also that there are teachers who talk of nothing but descent of the diaphragm? Why even his own literary colleague—Mr. Behnke—in the discussion he refers to, spoke only of the diaphragm, and the control to be obtained over this organ; and Mr. Browne himself speaks of the descent of the diaphragm being of necessity *followed up by* costal extension, and in his book on "Voice, Song, and Speech," to which he refers, he states that *the criterion of correct inspiration is an increase of size of the abdomen and of the lower part of the chest*. We should be sorry to do Mr. Browne an injustice, but cannot help thinking that his remarks bear the interpretation that he places much more stress on the descent of the diaphragm than upon the use of the lower ribs, and we willingly admit that he recognises the importance of expansion of the lower ribs, and is thus on sounder physiological ground than the advocates of abdominal breathing, pure and simple. Advice to the pupil to first contract his diaphragm is more likely to lead to exaggerated use of that structure than advice to expand the lower ribs is to lead to clavicular elevation. Mr. Browne would be well advised in future editions of his work to state clearly whether he wishes to teach full descent of the diaphragm and moderate expansion of the lower ribs, or full expansion of the lower ribs and the moderate descent of the diaphragm—*i.e.*, whether abdominal breathing or costal breathing is to be the chief element of the combined act, which he recommends as the correct method of inspiration. Mr. Browne is also quite mistaken in thinking that every teacher of the present day insists that

"in abdominal breathing descent of the diaphragm should be followed by full lateral extension of the ribs." There are some teachers who leave the pupil to breathe as he likes, others who speak of nothing but the diaphragm, and there was until lately one well-known teacher in London who insisted on the full expansion of the upper regions of the chest (superior costal breathing).—*Eds. JOURNAL OF LARYNGOLOGY.*]

NOTES.

Dr. EDWARD LAW, Dr. NORRIS WOLFENDEN and Mr. COALL have resigned all connection with the British Laryngological and Rhinological Association.

Dr. LUBET-BARBON (of Paris) and Dr. LICHTWITZ (of Bordeaux) have become collaborators of this Journal.

A MEETING of the British Laryngological and Rhinological Association is to take place on Friday, July 1st.

IN the June number of this Journal there appeared a review of Dr. Albert Bing's "Lectures on Otology." Through some unfortunate oversight the name of the publisher was omitted, and we desire to state now that this interesting book is published by the well-known firm of W. Braumueller, of Vienna.

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A SECOND CASE OF SO-CALLED "ANGINA
ULCEROSA BENIGNA" (HERYNG).

By Dr. JOHN SEDZIAK (Warsaw).

IN one of the July numbers of "Przegląd Lekarski," and also in No. 7 of "Monatsschrift für Ohrenheilkunde," I described a case of this rare disease observed by myself this year. This case, which referred to a patient twenty-four years old, differed a little from Heryng's cases, who, in all his cases, observed ulcerations only on the anterior pillars in the vicinity of the tonsils, and regards this situation as very characteristic of this disorder. In my case, however, the ulcers were on the posterior pillars in their upper parts. In spite of this difference, from the typical appearance of these ulcers, and from the typical course described for this disease, I did not hesitate to include this case among those described as "angina ulcerosa benigna" (Heryng¹). The more so, in that bacteriological investigation which I performed in the above case gave results analogous to those obtained by Bujwid in Heryng's cases, *i.e.*, there were found the micro-organisms called by him, "streptococcus monomorphus et variegatus." These latter, at least, judging by the affirmative observations of Prof. Masucci (Naples)², may be regarded to a certain degree as characteristic micro-organisms in this disease. At the end of my paper I remarked that this disease is perhaps not so rare as would appear, such cases being frequently overlooked. This remark was not without

¹ "Gaz. Lek.," 1892, Nos. 7 and 8—see also report in this Journal. ² "Annales de Maladies de l'Oreille," etc., Dec., 1891.

reason, because in a relatively short time (some months) I have had occasion to observe another case, which this time showed all the signs regarded by Heryng as typical of this disease. In this case I also made a bacteriological examination.

S., thirty years of age, a music teacher, consulted me for the first time on the 2nd of June, 1892, complaining of slight pain in swallowing, and "sores" in the throat. He had previously been seen by Drs. Sieragowski and Baczkiewicz. The latter, believing the condition to be "angina ulcerosa benigna," kindly sent him to me for further observation. The present disease commenced about a week ago, without any distinct general symptoms, without fever, but with slight pain in swallowing. The patient, however, was troubled on seeing two "sores" in the throat (first on the left, and then on the right side), which induced him to seek medical advice. He relates also that at the commencement there was pretty considerable redness of the whole soft palate. As to previous history the following points deserve mention: His mother had died from carcinoma uteri. The patient himself had measles in his sixth year; ten years ago he had syphilis; and finally, six months ago, "influenza." There was no abuse of tobacco or alcohol (he smoked twenty cigarettes daily). On examination I found the patient well built and well nourished. No fever. In the internal organs no changes. In the nose, crista septi and slight chronic catarrh. Moderate pharyngitis granulosa. Nothing in the larynx, naso-pharynx, or the ears. In the oral cavity, however, were at once detected two symmetrical ulcerations situated on both anterior pillars, in the neighbourhood of the tonsils, the one on the left side a little smaller and rounder, the other on the right more oblong, of greater diameter (parallel with the pillars), about one centimètre across (perpendicular with the pillars), and about eight millimètres long. The ulcerations are sharply distinguished from the surrounding and very little changed (slight redness) tissues. The ulcers themselves are a little deepened, covered with greyish-white secretion; difficult to cleanse; a little bleeding follows touching with a probe, but they are little painful. I ordered the patient simple treatment (gargling with boric acid), and next day, after having previously cleansed the ulcers with a solution of sublimate (1:1000), I took one part of the secretion from the deeper layer by means of a sterilized platinum-needle, and put it on gelatine, as well as on agar-agar; another part on covering-glasses for microscopic investigations. The further course of the disease did not show anything particular. By gargling with salol (five per cent. of alcoholic solution, a teaspoonful in a glass of water), the ulcers began to diminish and became cleaner, so that on the 8th of June hardly any traces of ulceration on the right side could be noticed. The general state continued good, and pain on swallowing ceased. The whole process lasted about two weeks. The ulcers healed without leaving any cicatrices. The bacteriological investigations I made in the laboratory of the Jesus Christ Hospital, under the direction of Dr. Zakowski, director of the laboratory.

On examining, under the microscope, the preparations of the secretions of the ulcers, coloured with gentian violet, I found different forms of micro-organisms: single cocci, in couples, chains (streptococci), especially

short ones, and lastly, bacilli of different kinds. The cultures on gelatine did not thrive. On the agar, however (in the oven at 37° Cent.), I obtained two kinds of cultures : (1) in shape of small, coherent nests, white-greyish, and a little glistening ; (2) in shape of larger nests, round, or oval, elevated, dry, with uneven edges and greyish-yellow. On examining the parts of these cultures under the microscope in the living state, *i.e.*, in drops, as well as coloured with gentian violet, by means of oil immersion, with Abbé's condenser, I found mostly single cocci, or in couples—only in the first kind of culture there were also short chains, composed of small, single cocci. Longer chains, however, unequally coloured, *i.e.*, such as Bujwid called *streptococcus variegatus*, I was unable to detect. Inoculation of mice under the skin with part of the culture gave negative results. The result of the bacteriological investigation in this case cannot be regarded as positive. Indeed the cultures, especially the first, a little resembled those which Bujwid describes as *streptococcus monomorphus*, and such as I also obtained in my first case—at any rate, they were identical, especially as regards the second kind of culture. Microscopically these cultures did not show any forms typical of the above-mentioned *streptococcus monomorphus et variegatus*, and especially of this latter. What is the reason, that in this clinically typical case of this disease, these seemingly characteristic micro-organisms were not found, while in my first case, which differed a little from the type, the result of bacteriological examination was identical with those which Bujwid, Heryng, and Masucci mention ? Perhaps in this case I performed the bacteriological investigation too late (at the end of a week). At any rate, this case does not lead me to any conclusion as to the significance of the above micro-organisms in this disease. We must wait for further observations, of which there are at present still too few (in all of fifteen cases, *i.e.*, ten Heryng's, three Masucci's, and two of mine—only in four, *i.e.*, two Heryng's, one Masucci's, and two of my cases, suitable bacteriological investigations were performed).

DEAFNESS CAUSED BY HEREDITARY SYPHILIS.

By HOLGER MYGIND, M.D., Copenhagen.

As far back as 1853, Wilde¹ described a peculiar form of "otitis in connection with ophthalmia," with which he had been long familiar, and which he considered as a result of a constitutional diathesis, *viz.*, "strumous diathesis." The deafness, according to Wilde, generally occurred at from five to fifteen years of age, co-existing or alternating with ocular disease, which generally assumed the character of *corneitis* or *choroido-iritis*.

According to Wilde's description of this form of ear disease, and his reports of a few typical cases, there cannot be any doubt that Wilde's "strumous otitis in connection with ophthalmia" is identical with the ear

¹ "Practical Observations on Aural Surgery, and the Nature and Treatment of Diseases of the Ear," London, 1853, p. 273.

disease described in 1863 by J. Hutchinson,¹ in connection with certain eye diseases consequent on inherited syphilis, which latter disease especially manifested itself by the existence of special malformations and alterations of the structure of the teeth, the co-existence of these peculiar diseases of the eye, the ear, and teeth being described later on by Fournier,² termed the "Triad of Hutchinson."

Hutchinson's classical essay did not at first attract much attention amongst otologists, although Hinton³ confirmed the results of Hutchinson's investigations. During the last twenty-five years there have, however, appeared several contributions towards the elucidation of this peculiar form of ear disease, viz., from England (Jones,⁴ Dalby⁵), America (Kipp,⁶ Knapp⁷), Denmark (Mygind⁸), Germany (Schwabach⁹), and especially from France (Levergne and Perrin¹⁰, Hermet¹¹, Bruncher¹², Jegu.¹³) Finally, Fournier, in his elaborate work on hereditary syphilis, has investigated the matter very thoroughly.

I have recently had the opportunity of examining a new case of hereditary syphilitic ear disease, and as such cases are as yet very rarely reported it might deserve publication.

Anna S., nineteen years of age, was seen by me first on the 6th of January this year. Her father, a healthy-looking man, gives the following history. He and his wife, who died from puerperal fever, have had altogether eight children, of which the patient is No. 3, and of which No. 1, No. 5, and No. 6 are living and healthy, while No. 2, No. 4, No. 7, and No. 8 were stillborn. The father knows for certain that his wife, previous to her marriage, suffered from a syphilitic affection of the throat, while he himself has never exhibited any signs of syphilis.

When the patient was seven years old she contracted a disease of the eyes, after having previously enjoyed good health. The most prominent symptoms of the eye disease were photophobia and a considerable diminution of sight, developing at last to almost total blindness, lasting for about four months, after which period she gradually recovered her sight. When fourteen years old, she began to be somewhat deaf, but was, however, able to hear everything said to her in church during her confirmation. When fifteen years old she suffered from "hip-joint

¹ "A Clinical Memoir on Certain Diseases of the Eye and the Ear consequent on Inherited Syphilis," London, 1863.

² "La Syphilis Héritaire Tardive," Paris, 1886.

³ Toynbee, Joseph: "The Diseases of the Ear, their Nature, Diagnosis, and Treatment," with a Supplement by James Hinton. London, 1863, p. 461.

⁴ "Deafness in Hereditary Syphilis," *Medical and Surgical Reporter*, 1877. Reported by Fournier, *loc. cit.*, p. 238.

⁵ "Syphilitic Affections of the Ear," *The Lancet*, 1877, Vol. I., p. 191.

⁶ "On the Ear Affections in Hereditary Syphilis," Transactions of the American Otological Society, Vol. II., Part IV., Boston, 1880, p. 390.

⁷ "Ueber Ererbte Syphilitische Ohrenkrankheiten," *Zeitschrift für Ohrenheilkunde*, 1880, Vol. IX., p. 349.

⁸ "Bidrag til Kjendskabet til den Heredo-Syphilitiske Dovhed," *Nordiskt Medicinskt Arkiv*, Vol., XXII. No. 7.

⁹ "Ueber Ererbte Syphilitische Ohrenkrankheiten," *Deutsche Medicinische Wochenschrift*, 1883, p. 550.

¹⁰ "Observation Type de Syphilis Héritaire Tardive," *Annales de Dermatologie et de Syphilographie*, Tome IV., 1883, p. 442.

¹¹ "De la Surdit  dans la Syphilis H r ditaire," *Ibid.*, Tome V. 1884, p. 280.

¹² "Essai sur les L sions de l'Appareil Auditif dans la Syphilis Cong nitale et Acquisie," Th se, Nancy, 1883.

¹³ "De la Syphilis de l'Oreille," Th se, Paris, 1884.

disease" (of which there is no trace left), and at this time she woke up one morning and found herself totally deaf. Besides deafness there were also very violent noises in both ears, and also considerable giddiness. Since then the patient has been totally deaf; the noises in the ears subsided somewhat, but are still sometimes very troublesome, besides which she has now and then pains in both ears. The giddiness remained for some time, and her gait was for a long period somewhat staggering. She enjoys otherwise good health.

There are no signs of hereditary syphilis present; the teeth especially do not exhibit anything characteristic, although the lower front teeth are somewhat conical in shape. There are on both eyes slight nebulae of the cornea, residua of exudates in the anterior capsule of the lens, and scattered pigmentation of the choroidea.

The examination of the ears shows a greyish drum-head without any reflex on both sides; the incus (? malleus) is drawn considerably inwards and upwards, and fixed to the tympanic wall. The hearing is absolutely = 0 on both sides. There is a slight pharyngitis granulosa, and a slight hypertrophic nasal catarrh.

I did not attempt any treatment, having been convinced from former experience of the hopelessness of a case of deafness like the present where the auditory nerve has been quite out of function for some years.

On the basis of the case described above, and others, reported in literature, the following short description of hereditary syphilitic ear disease might be given.

Frequency.—Hinton states (*loc. cit.*, p. 461) that one-twentieth of the ear patients admitted to Guy's Hospital suffered from hereditary syphilitic deafness. I myself could, however, amongst several thousand cases in Dr. W. Meyer's case books, only find seven patients with this ear disease (*loc. cit.*, p. 9), and my own experience tends to show that hereditary syphilitic ear diseases are not frequent.

Sex.—All authors agree that the female sex is considerably more disposed to hereditary syphilitic deafness, a fact which is somewhat difficult to explain.

Age.—It seems that the age from eleven to seventeen years is the period of life in which the deafness of hereditary syphilitic origin most frequently occurs. Hutchinson has, however, observed it occurring so late as at the age of twenty-five (*loc. cit.*, p. 179), and Meyer (Mygind, *loc. cit.*, p. 5), as early as at the age of four years.

Causes.—Amongst these the principal is, of course, syphilis in one or both parents. It must, however, be borne in mind that deafness may occur during puberty, with the symptoms to be described as characteristic of the hereditary syphilitic ear disease, without it being possible to trace any history of syphilis in the parents or the patient in question, nor any signs of hereditary syphilis in the latter. This was especially the case in three patients observed by Schwabach (*loc. cit.*), who thinks, therefore, that not all cases which exhibit the symptoms to be described below are of syphilitic origin. This question is difficult to solve. The circumstance, however, that a history of syphilis often is very difficult to obtain, and that an individual with undoubted hereditary syphilis might not show any of the well-known signs of this disease (see Mygind, *loc. cit.*, p. 14) must necessarily forbid too much weight being laid upon mere negative evidence. Whether scrofulosis or other constitutional pathological con-

ditions might be of influence on the ear disease in question cannot be decided at present.

Symptoms.—The principal symptom, viz., the deafness, occurs without any immediate cause, and without any premonitory symptoms, except the eye disease to be described further on. Exceptionally the deafness begins as a slight impairment of hearing, which by degrees increases to more or less complete deafness, and it is also the exception that one ear only is affected. In most cases the deafness is immediately very pronounced and bilateral, and it is, anyhow, characteristic of hereditary syphilitic deafness that it increases comparatively rapidly to the highest degree, and very often the specific function of the auditory nerve is completely discontinued—at least, on one side. There may, however, appear short periods in which the disease is at a standstill, or even of remissions followed by more or less sudden exacerbations.

The *deafness* is nearly always accompanied at its outset by persistent and very troublesome noises in the ear, which generally do not subside until the deafness is complete. They often seem to assume the character of musical tunes, or even of melodies (illusions of the hearing), or they are compared to bell-ringing, birds' songs, etc.

Disturbances of the equilibrium is another constant accompanying symptom from the very first beginning of the ear disease. These disturbances generally assume the character of giddiness, which may produce a staggering gait even for years; but sometimes they are so severe and sudden that the patient has the greatest difficulty in keeping himself upright, and they may then be accompanied by feelings of sickness or vomiting. They are, therefore, frequently a source of great trouble to the patients.

Other ear symptoms are sometimes present, viz., pains in the ears and discharge; they are, however, not characteristic of the ear disease in question.

Brain symptoms (the disturbances of equilibrium not included) are rare, except headache, which sometimes may be present.

Eye symptoms from certain diseases of the cornea, the iris, and the choroidea are very characteristic of hereditary syphilitic ear disease described above. They generally appear before the deafness occurs, and only quite exceptionally after the impairment of the hearing has developed, or simultaneously with it. There may be an interval of a few months, or of several years, between the commencement of the eye and the ear symptoms, and frequently the vision improves considerably when the ear disease begins. The form of eye disease most frequently met with is that form of keratitis called interstitial, or diffuse, or parenchymatous, which frequently gradually impairs the vision to a very great extent: but even in cases of almost complete blindness the cornea frequently clears up, and renders the vision good again. It is, however, not unfrequent that the keratitis is complicated with iritis or choroiditis, and in such cases the vision is often considerably impaired for ever.

Morbid Anatomy.—Baratoux¹ has made *post-mortem* examinations on the ears of forty-three children with hereditary syphilis, the oldest child

¹ "Progrès Médical," October 29th, 1837, p. 334.

being, however, only four years old. He found, amongst other pathological changes, abnormalities of the blood-vessels in the internal ear, resulting in aneurismal expansions and hæmorrhages, and it seems probable that similar changes occur in the cases of hereditary syphilitic ear disease described above. The different authors do not, however, agree as to what part of the hearing organ is the seat of the disease, Hutchinson considering the auditory nerve, or its distribution in the labyrinth, as the seat of morbid changes, while Kipp and Fournier refer these to the fourth ventricle, and Knapp thinks that the labyrinth is diseased. I think all the ear symptoms observed in hereditary syphilitic deafness can easily be explained as originating principally from a labyrinthine disease, but must, on the other hand, lay stress upon the fact that objective and subjective symptoms of catarrhal disease of the middle ear are not at all unfrequently observed in cases of hereditary syphilitic disease, and especially perhaps in the earlier stages of the deafness. Although I do not think that the middle ear disease plays any important rôle in the loss of hearing, I think that several circumstances tend to show that the catarrh of the tympanic cavity might have some influence as the primary cause of the labyrinthine disease.

Prognosis.—The prognosis is absolutely bad, and it seems that there is only one case—observed by Knapp—on record where the disease took a favourable course.

Treatment.—Although the different observers have tried many different modes of treatment, local as well as general, the deafness is sure to progress uninfluenced by any treatment. It seems even as if local treatment sometimes only causes a more rapid progress of the deafness, and I think, therefore, it is only advisable to try general anti-syphilitic treatment or injections of pilocarpin.

ASSOCIATION MEETINGS.

ANNUAL MEETING OF BELGIAN LARYNGOLOGISTS AND OTOLOGISTS, LIEGE.

June 5, 1892.

About twenty-five Belgian physicians comprised the meeting, which was presided over by Dr. Schiffers. Among the strangers present were Drs. Gouguenheim (Paris), Noquet (Lille), Wagner (Lille), Koch (Luxemburg), and Moll (Arnheim).

Dr. SCHIFFERS presented a young man, operated upon ten years previously for *Papillomatous Vegetations of the Larynx*, and called attention to the curability of these affections, attributing the success obtained to insufflations of savin and tannin (equal parts), which he had continued for some weeks.

Dr. GOUGUENHEIM remarked that in certain cases of recurrent papillo-

mata he had obtained complete cure by curettage and frictions with camphorated naphthol.

Dr. HICGUET remarked that he had obtained the same result by cauterizations with fused chromic acid. A probe is lightly heated at its extremity, and plunged into chromic acid, which fuses and adheres to the probe. These cauterizations are renewed every eight days until complete disappearance of the growths.

Dr. BAYER recommended frictions with pure glycerine in these conditions.

Dr. SCHIFFERS showed a second patient, with a very rare affection, consisting of a *Circumscribed Dilatation of the Upper Portion of the Œsophagus*. This anomaly is generally considered to be congenital, but in this case the origin of the diverticulum was clearly due to pressure by a goitre. The patient did not suffer any inconvenience from the presence of this dilatation.

Dr. SCHIFFERS presented a third patient, exhibiting *Specific Disease of the Larynx*. The lesion was limited exclusively to the epiglottis, which had nearly entirely disappeared. This had occurred very gradually, the patient experiencing no inconvenience. No distinct symptoms of syphilis had ever been evident, but the diagnosis was confirmed by the speedy cure which took place under mercury.

Dr. CAPART then showed a child presenting at the base of the cranium the *Remains of a Fibrous Polypus*. This child had previously been operated upon for adenoid vegetations. When he presented himself anew to Dr. Capart he found a tumour descending into the pharynx. Bipolar electrolysis was employed, two needles being introduced through the nasal fossæ and two in the pharynx—actually it was monopolar electrolysis that was employed—for fifteen minutes, using twenty-five milliamperes.

Dr. GOUGUENHEIM considered monopolar electrolysis to be tedious, and preferred the bipolar method, using sometimes even sixty milliamperes. In electrolysing a growth of this kind one day he saw it perforated in a very short time—about ten minutes.

Dr. CAPART then reported three cases of *Mycotic Affection of the Throat*. In the three patients there were extensive whitish spots bathed with muco-pus, and in all there occurred paralysis of accommodation and mydriasis.

In the first case it was found that the patient had been in the neighbourhood of several sick pigeons, and an autopsy of the birds that died exposed the same condition from the beak to the œsophagus as the patient was affected with.

In the other two cases the affection appeared to arise from eating "paté de perdreaux." The principal symptoms were dysphagia, vomiting, diarrhœa, and dilatation of the pupils. A rapid cure was obtained.

Dr. Capart thought that the condition was a microbic affection related to diphtheria.

Dr. DELIE recorded a *Rhinoplastic Operation for an enormously Hypertrophied Nose*. The lobule was seven centimètres round. The operation consisted of an incision from the root of the nose along each side, so as to preserve only about the posterior third of the alæ. A third incision

transversely connected to lateral incisions at their ends. A triangular flap was thus obtained and resected, its thickness varying with the size of the nose. The cartilages were partially removed, and the flaps of skin from the alæ remaining were brought together, and cure obtained in fifteen days.

Dr. HICGUET, in a case of a acneiform hypertrophy, employed galvanocauterization, obtaining thus a nearly complete reduction of the tumour. The patient, however, returned six years after with a similar hypertrophy. Dr. Hicguet then practised resection of a flap, the result being complete, and the nose being restored to its former shape.

Dr. DELSTANCHE made a further communication upon *The Employment of Liquid Vaseline in Affections of the Middle Ear*. He used pure or iodoformed vaseline in acute inflammations, and in purulent otitis of influenzal origin injections of iodoformed vaseline have produced marvellous results.

Dr. DELSTANCHE then showed *Gum Elastic Sounds made rigid by a Lateral Mandarin*, which allowed the necessary curvature to be given and designed for injections in diseases of the attic. He then presented small obturators and a modification of his rarefier.

Dr. WAGNIER presented notes of a case of *Pemphigoid Bullous Eruption of the Larynx*, occurring in a man sixty-three years of age. After some acute symptoms, the author saw two very clearly-defined pemphigoid bullæ developed in the larynx. The bullous eruption was entirely limited to this part. The course of the affection was rapid, quickly subsiding, and there was no recurrence. The author does not consider the condition to be true pemphigus but rather what was formerly called acute benign pemphigus, an affection which since Hebra has been included in the polymorphous erythemata.

Dr. BAYER read notes of a case of *Primary Epithelioma of the Larynx: Intubation, Tracheotomy, Laryngectomy, Artificial Larynx*.

F. B., aged sixty-one, came to Dr. Bayer with almost complete stenosis of the larynx, arising from large granular tumours. One of these growths, examined microscopically, confirmed the diagnosis. Dr. Laurent found it to be well-defined epithelioma. Two days after, a further trial was made to remove these growths, in order to free the larynx a little. Hæmorrhage occurred, necessitating intubation, and subsequently tracheotomy, which was performed at the Hospital St. Jean. Fresh attacks of suffocation occurred next day and the following night. The canula was too short, and had slipped out of the trachea. A larger one was introduced, giving complete relief. Fifteen days after, laryngotomy was performed by Dr. Lavisé, but not being certain of the extent of the disease, he removed the whole larynx successfully, and without subsequent reaction. Cicatrization was rapid, and four weeks later an artificial larynx was applied (Gussenbauer's). The patient could then speak, and was presented at the Belgian Academy of Medicine. Recurrence occurred three months after and the patient died suddenly.

Dr. BAYER read a paper upon *The Prodromal Affections of the Respiratory Apparatus in Typhoid Fever; Typical Pharyngeal Ulcerations.*

The onset of typhoid fever by affections of the larynx is not often presented to laryngologists. They therefore offer especial interest. The pathological symptoms are inflammatory injection of the nasal, nasopharyngeal, pharyngo-laryngeal and broncho-tracheal mucous membranes, and also of the mucous membranes of the Eustachian tubes and middle ear. Bayer has seen typhus fever commence by follicular angina. In the pharynx superficial ulcerations of the pharynx, faucial pillars, arch of the palate, and uvula occur in the form of small oval losses of substance, circular, with clean cut edges, shallow, and reaching to the muscular layer, and not covered with exudation. But little important in themselves (they disappear towards the end of the third week), they are only of significance from a diagnostic and prognostic point of view. Well characterized as they are, they cannot be mistaken for tubercular, aphthous or other ulcerations, and the typical bacillus of typhus is found there. Prognostically they always indicate gravity (Vousviller).

Bayer related a case exhibiting this symptomology, and justifying the unfavourable reputation of these ulcerations prognostically. As to the larynx, in which the *soi-disant* catarrh, since there is no increased secretion, is certainly the most frequent affection, there is besides observed, reddening of the vestibule, falling of epithelium, forming a furfuraceous layer on the epiglottis, the arytenoids, and the ary-epiglottic folds. If these ulcerations become deep they give rise to symptoms well known to laryngologists. According to Landgraf, these laryngeal symptoms are not in relation with the gravity of typhus.

Dr. SCHUSTER (Aix-la-Chapelle) spoke of *The Angina following Mercurial Treatment.*

It is especially seen after frictions. It is localized by caseous bleeding spots in the tonsillar cavity after displacing the anterior faucial pillar, and it indicates that the mercurial treatment ought to be suspended.

Dr. KOCH showed a photograph of *A Bone removed from the Larynx after Tracheotomy.* It was fixed between the vocal cords, and was pushed upwards and extracted through the mouth.

Dr. WODIN.—*A Case of Snoring, dating from Infancy.*

In a man of twenty-eight this was cured by cauterization of the turbinated bodies, removal of a portion of the uvula, cauterization of the posterior pillars and electrization.

Dr. RUTTEN.—*A Manubrium Mallei expelled from the Ear in a Clot of Blood.*

Specimen shown.

Dr. ROUSSEAU presented *Fenestrated Forceps for removing Spines from the Septum.*

Dr. EEMAN.—*Corradi's Tuning-Fork Test.*

Corradi's method was described in Bürkner's excellent treatise on otology, along with those of Weber, Rinne, etc., and Eeman was anxious to

know if it deserved to be placed alongside of these classical tests. He experimented on 50 subjects = 100 ears. Of these 66 were normal, and 34 were affected with various diseases. The result was negative in 50 cases, in seven there was secondary sensation lasting only a fraction of a second, and a repetition of the experiment gave in all cases a negative result. In two cases the result was positive, there being a secondary sensation from two to three seconds. In the second group there was uniformly a negative result.

Eeman came to the following conclusions: The method of Corradi gives only exceptionally a positive result. When secondary sensation exists it is only of very short duration. Corradi's test has not the value that has been attributed to it. The experiments were made with the "la" tuning-fork of the Paris Conservatoire, and the "do" of the same octave.

Dr. EEMAN.—*Whispered Voice as a Measure of Hearing-power.*

In certain cases the limit of the zone of audition is easy to determine, the zone of silence sharply succeeding that of sound. In other cases there is a doubtful zone, extending sometimes for several metres. Eeman attributes to these facts a prognostic significance. If there is a doubtful zone, and especially if of considerable extent, the prognosis is unfavourable. Possibly, also, these data have a diagnostic value as regards the seat of the anatomical lesions causing the deafness. It is chiefly in cases of labyrinthine affection, either primary or consecutive to otitis media of old standing, that a doubtful zone is most distinct.

Dr. DELSTANCHE preferred the method of Bing. When a tuning-fork is placed on the vertex, and the ears are stopped, there is increased resonance in the affected ear if the disease is tympanic, but in the sound one if it is labyrinthine.

Dr. HICGUET recorded a case of *Abscess of the Trachea*.

The patient was a man aged about thirty-six, who had lived for several years in the island of Borneo, and suffered from the diarrhœa of the country. When seen at the polyclinic the diarrhœa persisted, and he was considerably emaciated. He had a cough, with scanty expectoration of mucus. The left vocal cord was found to be paralysed. Auscultation and percussion revealed no pulmonary affection, and there were no glandular swellings in the neck. A bacteriological examination of the sputum was made, and fifteen days after Dr. Hicguet again saw the patient. He was suddenly called to him to find him in a suffocative paroxysm, the impediment appearing to be expiratory, and as if a growth was suddenly projected into the passage so as to obstruct it; inspiration was free. Laryngoscopic examination only revealed the paralysis of the left cord, and the three first rings of the trachea could be seen without any appearances of tumour. There was no glandular enlargement, but pressure upon the left side of the trachea provoked slight pain. The bad condition of the patient caused the idea of tracheotomy to seek the cause of the respiratory obstruction to be rejected. Next day the patient suddenly expectorated pus mixed with air-bubbles. Koch's bacillus was not discovered in the pus. Respiration then improved greatly, but the enteritis carried the patient off two days later.

Unfortunately, autopsy could not be obtained, and the diagnosis of abscess of the trachea could not be confirmed.

Dr. HICGUET remarked that abscesses of the trachea are rare. Dr. Jacobi published a case last year, Dr. Rosenfeld of Stuttgart has recorded two cases, and Dr. Gotthelp of Munich recorded one case. This was a perichondritic abscess of the trachea. Gerhardt, in his work on perichondritic abscesses, states that they depend upon syphilis. In Dr. Hicguet's case there were no specific antecedents to be found. It was probably one of those perichondritic abscesses which explained the paralysis of the cord by compression of the recurrent.

Dr. DELIE asked if it was not a purulent bronchial gland?

Dr. HICGUET replied that perhaps it might be so, but there was no glandular enlargement. Autopsy alone could have decided the question, for in both cases laryngeal symptoms are observed.

Dr. BOLAND had published the case of a child in whom a glandular abscess of the trachea had caused sudden death, and no premonitory sign of the condition had ever been observed.

Dr. LAURENT.—*The Mastoid Antrum in the Child.*

The mastoid antrum may be the seat of suppuration either primary or consecutive to tympanic disease, the pus accumulating in this latter cavity, then in the attic, and passing through the *aditus ad antrum* into the antrum itself. Supposing that rétention of pus has taken place in this region, paracentesis is performed, a certain amount of pus is evacuated, but the inflammatory phenomena continue. In such a case, in particular, an exploratory puncture can be made by a special process. The instrument consists of a perforating stem with a chisel-shaped cutting extremity. This stem is fitted with two canulas, the one long for introduction, the other short for fitting at the end of the other, round the extremity of the stem. To introduce the instrument one places its point at the postero-superior angle of the osseous meatus, and directs it backwards and inwards with a rotatory moment. The cavity can then be washed out and a more extensive operation proceeded with if necessary.

Dr. MOLL (Arnheim). *Two Cases of Mastoid Abscess with Perforation of the Median Wall (Bezold's) following Influenza. Recovery.*

A man, aged fifty, attacked with influenza in December, presented himself early in January with otorrhœa of the right ear, intense pains in the temples, lowering of hearing power to such an extent that loud voice was only heard quite close, no mastoid phenomena. The left membrane was incised, and the perforation in the right one enlarged, and irrigation of the tympanum through the Eustachian catheter was practised. Fourteen days later there was slight swelling of the right mastoid, which disappeared after antiphlogistic treatment and painting with iodine, &c.

On the 6th of February there was a renewal of the swelling extending to the apex of the process, where in a few days there formed a hard, painful tumour, filling up the retro-maxillary space, and effacing the outlines of the mastoid. On the 10th of February the abscess was opened by operation at the level of the meatus (in order to penetrate more easily,

in case of necessity, into the mastoid antrum). There was found a soft, spongy and congested condition of the osseous substance, with here and there a spot of softening. On removing this with the cutting spoon healthy tissue was met, so that there was no need to open the antrum. The external surface was dissected off, and when the periosteum and attachments of the muscles were detached from the process a quantity of pus escaped. The inner surface of the mastoid apophysis was reached, free curettage practised, and a drain inserted. The pain disappeared, and for six weeks the patient seemed to be getting well, but after a cold day he suddenly complained of a return of pain in the temple and in the opposite ear. On examining this ear the hearing power was found to be lowered, but the tympanum and mastoid showed no signs of inflammation. There was, however, underneath the mastoid, a hard swelling, just like the one on the other side, and later there supervened paralysis of the facial nerve. The symptoms did not disappear under antiphlogistic treatment, so Dr. Moll proceeded to operate on the abscess, making the mastoid opening lower down, in order to leave the antrum intact. He found almost the same condition as on the other side—bone thickened, periosteum difficult to detach, and the abscess perforating the median wall. In order to avoid retention of pus he removed a large portion of the tip of the process, and after free scraping filled the cavity with iodoform gauze. As the temporal pain persisted after the operation, he opened the antrum eleven days later, and found it full of granulations, but containing no pus. The pain, however, disappeared, and complete recovery took place.

As regards the origin of these abscesses, it is to be explained by the structure of the mastoid process, as Bezold has indicated. The most remarkable feature is the temporary suspension of the symptoms, their sudden reappearance, and the formation of abscess with perforation.

Moll is an advocate for early intervention in these acute cases, especially those following influenza. The operation is not injurious if, following the example of Hessler and Politzer, we open only the abscess, and not the antrum. In this way deeper lesions are prevented, and prompt recovery is favoured.

Dr. BOVAL read notes of a case of *Operation for Naso-pharyngeal Polypus*.

The polypus was of the size of a large nut, inserted by a pedicle at the base of the skull, movable, and occupying the right half of the pharyngeal vault. After fruitless efforts to surround it with the galvanocautery loop, introduced through the nose, he had recourse to Dr. Goris's snare, with which he removed the tumour with ease and without accident.

Dr. Hicguet (Brussels).

THE FRENCH SOCIETY OF LARYNGOLOGY AND OTOTOLOGY.

*Annual Meeting, May 2, 1892.**(Continued from page 323.)*

Dr. ASTIER read a paper on *The Treatment of Certain Strictures of the Nasal Fossa.*

The author, in the last number of the "Annales des Mal. de l'Oreille et du Larynx," described a new method of treating certain nasal stenoses, a subject to which he here returns. His apparatus is a cutting drum, 15 mm. long, having saw-teeth at its free border, and of 4-10 mm. breadth, which is fixed on to the dental engine, and the apparatus acts as a trephine and not as a drill. These instruments are meant to be employed in nasal stenoses exclusively arising from the bony skeleton. In hypertrophy of the turbinateds the instruments, though useful, can be replaced by the chisel or gouge. Septal ridges are better removed by saws, but the use of these instruments is difficult in cases where adhesions exist, the result of previous cauterizations. A to-and-fro movement of the saw is not always possible where there is obliteration of the posterior part of the nasal fossa. It is in these cases that the author's instruments find their principal use. When a large opening has been made, or a tunnel has been bored through the bony stenosis, one is master of the situation, and with the galvano-cautery or other trephines the cavity can be enlarged.

The author details a case illustrative of his treatment. When the ridge is located which it is desired to remove, the instrument is held in the hand like a pen, and applied to the part, being pushed from before backwards along the direction of the septum, according to the resistance felt. With the terminal of 5 mm. diameter a single application generally suffices to cause the disappearance of a ridge of average dimensions. Slight irregularities left along the edges of the furrow caused by the instrument may be got rid of with the galvano-cautery. The terminal of 7 mm. diameter is the best for the turbinateds. Only in one case out of 350 operations has a troublesome epistaxis occurred, and in another slight inflammation of the upper maxilla. Antiseptic precautions ought, of course, to be vigorously applied. The nares ought to be tamponed with salol or salicylic gauze after operation, and disinfectant injections be used. After two or three weeks all traces of inflammation and suppuration disappear.

Dr. MOURE remarked that the Germans employ the curette, gouge, or galvano-cauterization. Americans do not all use Bosworth's saw, and the drill was known in America before it was employed in France; it is a useful method of operation for regions which cannot be reached by the saw or electrolysis. It may be useful, not only for certain affections of the septum, but for small osteomata of the nose. It is also useful for opening the antrum of Highmore, and the orifice can be made of any size wished, or enlarged by using larger drills. The operation is not disagreeable to the patient.

Dr. SUAREZ DE MENDOZA said that for twelve years he had employed White's machine in preference to the French drill; and he had removed nasal osteomata and perforated the antrum with it. The operation is no more painful than the prick of a Pravaz syringe. The drill ought to be in the armamentarium of every specialist.

Dr. ASTIER said that when, eighteen months previously, he had first employed the drill, he did not know of the works referred to. He insisted upon the value of the drill in removing bony spines. Though it has been endeavoured to utilize

the instrument for atresia due to thickening of the mucous membrane, this can have no other effect than to cause bleeding.

Dr. JOAL. *Tonsillar Fever and Purpura.*

Until latterly acute tonsillitis has been considered to be a simple inflammation of the palatine tonsils, and a purely local affection. Lasèque, in 1868, believed it in certain cases to be the manifestation of a general condition. Bouchard in 1881 included tonsillitis amongst the disorders which might be complicated by infectious albuminuria. Landouzy in his essays on "amygdalian fever" (1883 and 1885) insisted upon the general characters of the affection. Joal, in 1886, brought forward many cases of orchitis and ovaritis observed in acute tonsillitis. The idea of infectious tonsillitis is now generally admitted, and has been the subject of an inaugural thesis by Sallard (1892). Nephritis, orchitis, ovaritis, endocarditis, and arthritis are complications which have been studied. Some cases of purpura in tonsillitis have been published, but their number is very small. Dr. Joal records three new cases. In the first case, a man of arthritic temperament, the purpura appeared on the twelfth day after the onset of the tonsillitis, upon the legs, thighs, and abdomen, the chest and forearm, cure not taking place until the twenty-third day. The second case was that of a lady of twenty-eight, and six days after the onset of acute tonsillitis purpuric spots appeared upon the inner aspect of the thighs, followed by similar eruption on the legs, abdomen, and inter-mammary region. The third case was that of a man, aged forty-three, of arthritic temperament, attacked with right tonsillitis for eleven days, when purpuric spots appeared on the front and back of the thorax and abdomen. There was also a trace of albumen in the urine.

Dr. Paul Le Gendre made a communication to the Soc. Méd. des Hôp., recording the case of a woman who had a tonsillitis of long duration, in the course of which she had several eruptions of purpura and papular erythema, which ended when the angina did. C. Bocca, in 1883, recorded the case of a patient who manifested purpura a month after an angina, and in the interval between the two manifestations remained in a state of profound depression. In a second case an angina developed between two attacks of purpura. In 1884, Rehner recorded a case of purpura of pharyngeal origin, and in which the pathogenic agents were staphylococci. In the patients observed by Le Gendre and Claisse streptococci would appear to have been the principal agents of the tonsillar lesion. But the most various microbes may be present and determine purpura.

The method of its production is intoxication by soluble poisons—toxines—whether they alter the composition of the blood or influence the vaso-motors. Dr. Joal adopts this view, which has been supported by Le Gendre and Claisse, but was not able to investigate the pathogenic agents, either in the tonsillar products or the purpuric spots.

(To be concluded.)

PARIS SOCIETY OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

Calculus of Wharton's Duct. By Dr. H. CHATELLIER.

Dr. Chatellier presented a calculus of this kind taken from a man aged thirty, who had a circumscribed swelling of the right submaxillary gland and spontaneous pains, which lasted for five days. Wharton's duct was distended, and a hard, ovoid, well-defined lump was situated two centimètres from its extremity. Retention was not absolutely complete. Pressure failing to dislodge the calculus, an incision was made with a bistoury, and the calculus extracted. It was one centimètre long,

and five millimètres broad, of irregular surface and yellowish, weighing fifteen milligrammes when dried.

A Note on Contraction of the Transverse Arytenoid Muscle (an endeavour to interpret the laryngoscopic signs attributed by Gerhardt to "bilateral and complete paralysis of the posterior crico-arytenoid muscles"). By Dr. ALBERT RUAULT.

The old researches of Longet and the modern ones of Jeanselme and Lermoyez upon the larynges of patients dead of cholera have definitely proved that the action of the transverse arytenoid muscle is to strongly approximate, even to contact, the inner surfaces of the arytenoid cartilages. The vocal apophyses follow the movement of the bodies of the cartilages and approximate, but without contact, and preserving a relatively slight mobility. The structure and functions of the posterior crico-arytenoid muscles are also exactly known. Rühlman showed that this muscle was composed of two distinct bundles, the one external, nearly vertical, large and voluminous relatively to the other, of which the fibres are more horizontal. Hayes established the fact that the external fibres draw the arytenoid cartilages outwards and downwards, opening the glottis in triangular form (calm inspiration); the others, when their action is superadded to the external fibres, causing the cartilages to rotate and make the ordinary triangular glottis take a pentagonal form (forced inspiration). Jelenffy's researches teach us that, independently of the respiratory rôle, the posterior crico-arytenoid muscles are not less important as vocal muscles, assuring the fixation of the arytenoid cartilages and the tension of the vocal cords during phonation when they act in concert with the lateral, the thyro-arytenoid, and the crico-thyroid muscles.

Isolated contraction of the transverse arytenoid muscle leads to complete occlusion of all the posterior part of the inter-arytenoid region, leaving a slight interval between the two lips of its anterior portion. It will cause the glottis to assume the form of a fusiform cleft of a length of about three-quarters of the antero-posterior diameter of the laryngeal cavity at this region, and presenting its maximum largeness of an average of two millimètres, at the height of the extremity of the vocal apophyses. These preserving a certain mobility, whilst the action of the lateral adductors and tensors is not combined to the contraction of the transverse arytenoid, will be raised and slightly separated by the current of air at each expiration, and at each inspiration they will be lowered by the pressure of the air drawn in. The transverse arytenoid will not only annihilate the action of the antagonistic muscles (*i.e.*, the external fibres of the posterior crico-arytenoid muscles); it will also oppose the accomplishment of the respiratory function of the internal fibres of these muscles, which cannot rotate the arytenoids and carry their apophyses outwards if the external fibres have not commenced to separate the internal surfaces of those cartilages. Without being absolutely prevented, respiration will be greatly impeded; the glottic space, although very narrow, will permit the passage of a quantity of air sufficient to assure hematosis while the patient is in repose, but on the least fatigue, or effort, dyspnoea will appear. The voice will not be interfered with.

The laryngoscopic signs and symptoms of contraction of the transverse arytenoid muscle occur from time to time for clinical observation. It is not rare to see patients who present no alteration of the speaking voice, but dyspnoic symptoms not visible while at rest, but indicated by stridor on the least effort, or by attacks of suffocation occurring under various influences often difficult to determine. Laryngoscopically, during respiration the internal surfaces of the arytenoids are found to be motionless and in contact, the vocal cords in the median line, but sufficiently flask-shaped (when not in dyspnoic spasm) to be alternately depressed and raised by the inspiratory and expiratory current, which passes across a narrow

fusiform space, the median part of which appears to be a little larger at the moment of expiration.¹

During phonation the laryngoscopic image shows nothing abnormal. Until now this condition of the larynx has not been referred to isolated contraction of the arytenoid muscle, which Ruault believes to be its true cause. Gerhardt called it bilateral and complete paralysis of the posterior crico-arytenoid muscles. Krishaber believed it to be unilateral spasm of the adductors, meaning the arytenoid muscle. Morell Mackenzie, Semon, and others shared the opinion of Gerhardt, admitting, besides paralysis of the abductors, a secondary contraction of the adductors. Krause leaned to Krishaber's view, believing it to be a primary contraction of the adductors with, in certain cases, a secondary myopathic paralysis of the abductors, an atrophy of these muscles consecutive to their functional inertia. Numerous authors (Gouguenheim, Tissier, Massei, Raugé, etc.) have adopted this latter view.

None of these opinions are justified by convincing arguments. It is not possible to conceive a complete paralysis of the posterior crico-arytenoid muscles without an affection of the voice, and without each effort at phonation being marked laryngoscopically by a movement of translation and oscillation forwards of the arytenoid cartilages. On the other hand, it is impossible to admit a general contraction of the adductors when the vocal processes are seen to follow during respiration the displacements caused by the current of air against the relaxed vocal cords, and fixed in vocal position by the lateral crico-arytenoids, only at the moment of phonatory effort. The perfect symmetry of the two halves of the larynx during respiration and phonation is not reconcilable with Krishaber's theory, applicable only to the case where respiratory flaccidity will be indicated by one vocal cord. Only can contraction of the arytenoid muscle give the explanation of the laryngoscopic image. But Ruault does not pretend to say that there is a primary contraction of this muscle; in fact, except in hysteria, this contraction is almost always secondary to isolated paralysis of the antagonist—*i.e.*, to a paralysis affecting only the external fibres of the posterior crico-arytenoid muscle, the two bundles of fibres of this muscle being physiologically and anatomically distinct. That there is no affection of phonation is easily explained, since the vocal function of the posterior crico-arytenoid are almost completely confined to the internal bundle antagonized by the lateral crico-arytenoid. It is intelligible that paralysis of *one* postero-external crico-arytenoid, from whatever cause (mediastinal tumours, tabetic or infectious peripheral neuritis, etc.), may be followed by contraction of the single arytenoid muscle giving rise to the same signs and symptoms as bilateral paralysis.

Meeting of March 4 (continued).

Dr. MÉNIÈRE.—*A Case of Foreign Body in the Ear.*

In April, 1891, a young foreign lady, aged twenty-two, was brought to consult Dr. Ménière on account of a moderate degree of deafness in the left ear, dating from August, 1890.

When bathing one day, in a rough sea, she was knocked down by a wave and thrown in almost a stunned condition on the beach. In the evening her left ear was somewhat deaf, and her voice seemed to resound in it. The local medical practitioner recommended repeated injections for several days without effect. The same result followed similar treatment at the hands of her family doctor. She

¹ These passive movements of the free edges of the vocal cords, more extensive near the middle portion, and which simulate approximation of the cords during inspiration, ought not to be confounded, as has been wrongly done, with inspiratory approximation of the vocal apophyses (inverse respiratory type), which is observed in other conditions.

then consulted an aurist in her native country, who found simply an unusual thickening of the membrane, and practised catheterization continuously without benefit.

At last, in April, 1891, the family visited France, and the young lady came under the care of Dr. Ménière.

On examination the fundus of the ear appeared uniformly concave and of a brilliant mother-of-pearl whiteness. The appearance did not correspond to any known pathological condition, and when, to clear up the doubt, the probe was used there was a sensation of quite an unusual degree of hardness and immobility. At the upper part, near the roof of the meatus, there was a delicately shaded line, but the probe detected everywhere the same density of resistance. There was no cerumen and no epidermic detritus. On learning the history of the sea-bathing incident, Dr. Ménière came to the conclusion that the case was one of a foreign body—one of those thin shells always found in the sand on the sea-shore. He filled the ear with "coal-tarized" glycerine, and after five minutes practised irrigation by means of "la grande pompe de mon père." At the second injection the foreign body fell out into the basin. It was a thin shell, of pearly tint, uniformly concave, just as if it had been modelled on the tympanum. The ear presented afterwards a normal appearance and the hearing became normal.

The chief interest in the case is the remarkable resemblance of the foreign body to the membrana tympani, and it deserves to be remembered on that account.

Prof. ADAM POLITZER.—*On the Opening of the Mastoid Process in Cases of Acute Median Otitis following Influenza.*

The frequency of inflammations of the middle ear in the course of the last two epidemics of influenza, varying from the mildest catarrh to the most intense supuration, is well known. This paper is limited to the description of cases of influenzal otitis media, complicated with abscess of the mastoid, which, owing to the rapid onset of menacing symptoms, call urgently for operative opening. This intervention is required much more often than in the course of protopathic acute median otitis.

Before describing the course and symptoms of the affection it is well to devote a little attention to the anatomical varieties in the structure of the normal mastoid process, as acquaintance with these has considerable importance in the localization of the disease, and in the determination of the mode of intervention.

The tympanum communicates, as is known, at its posterior part with a cavity of four or five millimètres in diameter, occupying the superior segment of the apophysis—the mastoid antrum. The vertical osseous portion situated below this presents, according to Zuckerkandl, great variations in its internal structure. In the first variety (thirty-six to forty per cent.) we find numerous air-containing cells of greater or lesser dimension are situated at a varying level (*processus mastoideus pneumaticus*). These cavities communicate with each other and with the antrum, but—this is the point of greatest importance in connection with the genesis of the abscess—these ways of communication are often so narrow that it is scarcely possible to introduce even the finest needle. In a second variety (twenty per cent. of cases) the conformation known as *processus mastoideus plecticus* is found. The antrum is the same as in the former, but there are no air-cells round it; it is surrounded by spongy bone, resembling the diploë of the skull, containing vessels and adipose substance. In certain individuals the whole apophysis may even be formed of a compact eburnated mass. In the last variety (forty to fifty per cent.) there is a combination of these various forms, air-cells and diploëtic substance being intermixed, and occupying in particular the antero-superior segment of this bony region.

Experience shows that the majority of cases of abscess due to influenza occur in mastoid processes of the pneumatic type, because the narrow passages between the cells and the antrum become closed up by the swelling of the mucous membrane, and retention of the pus ensues. It must be observed that the mere presence of pus in the mastoid cells does not necessarily indicate the existence of an osseous abscess, as it is constantly found in cases of suppuration of the middle ear, in which there was not the slightest sign of mastoid abscess manifested during life. The presence of pus in the mastoid is then explained by gravitation during the dorsal decubitus. In addition, tympanic inflammation may by continuity lead to the formation of pus in the mastoid cells, but as long as free communication exists between them, the antrum and the tympanum, and as long as pus can flow freely through the perforation in the membrane, the symptoms characteristic of mastoiditis do not develop. Nevertheless, occasionally, though very rarely, an abscess may be found in a mastoid of the diploetic type, but in such cases the suppurating cavities are much smaller than in the pneumatic. As regards the compact mastoids, their eburnated structure excludes all possibility of suppuration in their interior.

On the whole it is important to recognize that the abscesses have their seat *in the middle or lower segment of the vertical part of the process, notably in the superficial cells situated under the cortical layer.*

Before passing to the description of the symptoms, it is to be insisted on that whereas mastoid abscess consecutive to protopathic otitis media is susceptible of spontaneous resolution with absorption of the pus poured out into the cells, grippal mastoiditis is, on the contrary, little subject to such a termination, the pus in these cases having apparently a destructive action on the surrounding tissue, leading almost certainly to caries of the apophysis.

The symptomatology varies with the period at which the patient comes under observation. It is only exceptionally that the specialist has the opportunity of recognizing the affection at its outset. Usually, even in the majority of cases, we only see the patient when perforation of the membrane has already taken place.

The symptoms which precede perforation are those of ordinary suppuration of the tympanum, with redness and swelling of the membrane, and yellowish coloration of its posterior segment. At the same time there are lancinating pains in the ear and at the level of the mastoid process, sometimes mild at first, but soon becoming intense, radiating in various directions, towards the vertex, the occiput, the teeth, or even the shoulder. At the same time there is usually at the top and middle portion of the mastoid acute sensibility to pressure and percussion; and while at first the pains are somewhat mobile, later on they become more localized in a limited spot, and indicate the formation of an abscess. Generally, but not always, the point of sensibility to pressure corresponds to the situation of the purulent collection. There is notable elevation of local temperature on the affected side. The general temperature may at first oscillate between $37^{\circ}5'$ and $39^{\circ}5'$ ($99^{\circ}5'$ and $103^{\circ}1'$ Fahr.), rarely it reaches 40° (104° Fahr.). This hyperpyrexia may, however, be absent, and the writer has observed a case in which mastoid suppuration occurred without the temperature rising much above 37° ($98^{\circ}6'$ Fahr.).

The formation of mastoid abscess manifests itself often by clear objective symptoms. The membrana tympani undergoes distinct swelling, its superior portion projects in a conical or nipple-like manner; at the same time there is a lowering of the postero-superior wall of the auditory meatus, but this is of slight importance as an indication for opening the antrum. The aural suppuration is

abundant; only rarely does the discharge diminish, while the inflammatory symptoms persist with the same intensity in the mastoid.

The cause and termination of mastoid abscesses present several varieties. In a first series of cases, where the tympanum is not yet perforated, the mastoid pains come on at the same time as the inflammatory manifestations in the tympanum, or very soon after. In other cases the symptoms of the formation of a mastoid abscess only come on when the drum is already perforated. In cases of spontaneous resolution of the mastoid inflammation the pains diminish progressively, although slowly; there may even be temporary suspension of the painful symptoms for several days. In some cases, when this has taken place, the symptoms of the formation of the abscess have reappeared suddenly with such violence as to require immediate operation.

The symptoms of mastoiditis may persist several weeks with variable remissions of pain and fever. Generally a profuse suppuration indicates the persistence and extension of the abscess; on the other hand, one may think of retrocession of the lesion when the pus becomes less abundant. Cases have, however, occurred in which there was cessation of the median otitis at the same time that the perforation reappeared, while on the other hand the mastoid symptoms persisted. Meanwhile it may be said in general that influenzal median otitis, complicated with mastoid abscess, has a much longer duration than protopathic suppuration of the tympanum.

The termination of mastoid abscess may take place by spontaneous recovery, although this result is much more rare after influenza than in ordinary cases. This has been shown more in the last epidemic than in the one preceding it, as if the recent epidemic was of a more benign character. In a case recently operated on by Prof. Politzer at Dr. Low's dispensary several weeks after the commencement of the aural affection, and presenting all the signs of mastoid inflammation, there was found an enormous cavity filled with pus and granulations, which on its inner side reached to the neighbourhood of the lateral sinus, which was laid bare for several centimètres. Thanks to the surgical intervention, the cavity filled up and recovery has nearly taken place. If the case had been left, phlebitis, thrombosis, and death must have occurred.

In a few cases the mastoid abscess opens outwardly, but in general the integumentary coverings of the process are not so infiltrated as in ordinary cases. It is known that a purulent collection near the surface of the bone may lead to another, not communicating with it, under the periosteum.

That influenzal otitis may lead to death is undoubted, as shown by the following case:—

Leopoldine M—, aged thirty-five, was attacked with influenza last Christmas. On January 3rd there came on acute otitis. At the commencement of February she had violent pain in the ear at the level of the mastoid, and on the 15th there was great swelling round the auricle. On the 1st of March she entered Prof. Politzer's clinic with the following symptoms:—Abundant discharge of pus from the meatus, which was much narrowed by a swelling of its roof, no perforation being visible. Irrigation was practised easily. Loud speech was heard at three mètres. There was abnormal temperature, and over the mastoid there was a fluctuating abscess. In three days the abscess discharged itself by the meatus, the mastoid was not tender, the temperature was normal. By the 10th the discharge had much diminished. On the 12th there suddenly supervened a condition of coma with thread-like state of the pulse. She was roused by an injection of camphorated ether, complained of pain in the temples, and had ptosis on the right side. Later the coma returned, with bilateral ophthalmoplegia, deviation of

both eyes toward the right, and slight paralysis of the right facial nerve. Temperature 90° Fahr. She was transferred to Prof. Billroth's clinic, where Dr. Eiselberg trephined the mastoid. The lateral sinus was exposed, the dura mater was normal, but under it was a meningitic false membrane, especially on the posterior and superior part of the sinus. Puncture of the brain with a Pravaz syringe drew forth some pus, and opening of the abscess evacuated sero-purulent material. Death occurred six days after the operation. An abscess was found in the temporal lobe, and behind it was a smaller one.

Some anatomical specimens exhibited by Prof. Politzer further illustrated the subject. One was from a man of seventy-two, previously affected with marked deafness. On December 29th, 1891, he was attacked by influenza, complicated on January 9th by suppurative otitis of the right ear. Three days later the symptoms of meningitis came on, and the patient died. The preparation showed the drum-head not perforated, the tympanum full of creamy pus, the antrum with old fibrous tissue, which extended into the mastoid cells, and was bathed also with pus. The pus had perforated the wall of the sinus and the posterior part of the skull, leading to sinus thrombosis, and then to meningitis.

A second specimen was from a man aged eighty, who was attacked with influenza on the 9th of last February, followed by suppurative inflammation of the left tympanum, and later by erysipelas of the head, which, with metastatic nephritis, led to death. *Post-mortem*, there was no perforation of the membrane, but the tympanum was filled with purulent secretion, and the mastoid with sanious pus, which filled not merely the antrum, but all the cells. There was no direct connection with the erysipelas.

The diagnosis of the formation of the mastoid abscess depends on the *ensemble* of symptoms above mentioned, and on the course of influenzal otitis. It is most difficult at the commencement, because tenderness to pressure on the mastoid may come on at the beginning of ordinary acute otitis, and disappear in a few days. In the same way there may be temporary pain, occasioned by early congestion of the mucous lining of the cellules and osseous tissue of the mastoid. On the other hand, the diagnosis of abscess can be made with every facility and certainty when along with an abundant otorrhea and depression (swelling) of the postero-superior wall of the meatus there is severe pain in the mastoid, continuous fever, loss of sleep, nervous super-excitement continued beyond the eighth or tenth day from the commencement of the otitis. If these symptoms are present when the otitis has already lasted several weeks, the presence of a mastoid abscess is undoubted.

The presence of external, sub-periosteal abscesses, such as Schwendt has described, must be very rare, and can only be definitely established by the absence of pus in the mastoid after trepanation. In the cases in which Prof. Politzer has operated, whenever he has found pus outside, he has found it internally as well.

The treatment of influenzal median otitis varies with the period of the disease at which the patient seeks our advice.

If the case is seen early, before perforation has occurred, and the membrane is red, swollen, and bulging, there being at the same time mastoid pain, increased by pressure, there must be no delay in performing paracentesis of the drum-head to allow free exit for the contained pus. This is often sufficient to abort the mastoid inflammation; at the same time it is necessary to keep up the application of ice to the mastoid region. In a case with well-marked symptoms these disappeared completely after paracentesis of the membrane and the use of Leiter's cold coil behind the ear.

It is different when the case has lasted eight or ten days without perforation. Then there is a great probability that an abscess already exists in the mastoid, and

this must be opened after paracentesis of the membrane. A case treated in the country by Politzer illustrated the truth of this principle.

Similarly, when spontaneous perforation has taken place early in the disease, it is necessary, unless very grave symptoms call for urgent operation, to have recourse to antiphlogistic treatment. Leeches are rarely of any good at the commencement, and later on they are quite useless; on the other hand, the continuous use of local refrigerants (small ice-bags or Leiter's cold coil) has yielded in many cases most remarkable results. To increase the effect, the mastoid may be painted with iodine, or rubbed with iodo-iodide ointment under the cold coil. This treatment is most grateful to the patient, and has a diagnostic value, inasmuch as, so long as the patient finds it comforting, we may assume that the suppuration is still going on, but, when he begins to reject it, we may say with great probability that resolution of the abscess is taking place.

Daily irrigation of the middle ear with warm water, or one to two per cent. boric lotion through the Eustachian tube is also beneficial, although the mastoid abscess does not usually communicate with the tympanum. These means often effect a complete cure; but if, after three or four days, the mastoid pain and the pyrexia still persist, no time must be lost, and the mastoid must be opened at once. In most cases there is no danger in doing this, on account of the superficial position of the abscess. In discussing the question of early or postponed operation, we have to keep in mind cases of recovery under antiphlogosis; but, on the other hand, there are cases in which profound disease of the bone, meningitis, or sinus phlebitis, followed by death, have resulted from leaving matters to themselves. One is, therefore, led, seeing the innocuousness of the operation, to determine on early interference, especially as the abscess is then small, the necessary destruction of substance slight, and more likely to be followed by favourable and rapid recovery.

If the symptoms of mastoiditis have lasted for two or three weeks, immediate operation is called for. The seriousness of these abscesses of long standing is illustrated by the case of an anæmic and poorly-nourished young girl of twenty-two, attacked by influenza at the end of December, 1889, and, two days later, by left otitis media. Towards the middle of January, 1890, the retro-auricular swelling and the feverishness disappeared, but, on the 21st, she had tenderness of the left mastoid, copious discharge of pus from the meatus, bulging of the posterior segment of the membrane, and perforation, with pulsation in the antero-inferior part. Two days later, rigors and headache supervened, her temperature rose to 39.2° (102.5° Fahr.), and mastoid opening was performed. An abscess was found at the depth of five millimètres. In ten days there were symptoms of propagation of the disease to the posterior part of the cranium. A second opening was made further back, evacuating pus and exposing the dura mater. A few days later, delirium, followed by coma, came on, and she died. The autopsy revealed rupture of the sigmoid sinus, at the level of the posterior opening, and thrombosis in the venous channel. The posterior part of the dura mater was covered with a fibrinous deposit, and the cerebellum contained an abscess of the size of a walnut.

The operation is thus practised:—The neighbouring parts of the scalp are shaved and carefully cleansed. Under anæsthetics a vertical incision, slightly concave in front, is made about half a centimètre behind the insertion of the auricle, and four or five centimètres in length. This incision must be carried through all the tissues, including the periosteum, and should reach nearly to the tip of the process. The periosteum is then peeled off by means of an elevator, and pushed backwards and forwards so as to leave exposed a bony surface of one and a half to one and three-quarter centimètres square. All hæmorrhage is to be arrested by means of tampons of sublimate gauze or pressure forceps. As far as that goes,

the best method, even if the hæmorrhage is abundant, is to forcibly separate the edges of the wound by means of large retractors. A large layer of the bone is next to be removed by means of Schwartze's gouge. Often the first application of the chisel is sufficient to liberate the pus, which may spurt out forcibly. Sometimes it is necessary to penetrate to the depth of one and a half centimètres, but rarely further. Occasionally the bone has to be opened down to the lowest part of the wound, if the abscess extends towards the apex of the process. All diseased tissue is then to be scraped away with a sharp spoon.

It is a most important fact that these abscesses hardly ever communicate with the antrum, but are almost always isolated. We must, on no account, try to force an opening into that cavity, as our abscess, after we have been at pains to scrape and clean it, would become re-infected by the pus reaching it from the middle ear. It is quite different in chronic middle ear suppuration, where the chief object is to open the antrum in order to disinfect the tympanum by means of continuous irrigation.

After the abscess cavity has been scraped, it may very conveniently be explored by means of a small electric lamp. The wound should be bathed with weak sublimate lotion, and lightly packed with iodoform gauze. A few or more stitches may be inserted according to the amount of bone removed. In superficial cases the whole wound may be sewn up after being thoroughly dusted with iodoform. In deeper abscesses, however, only the upper and lower extremities of the wound should be closed and an iodoform dressing applied, as further scraping may be necessary. Later on, when the suppuration has ceased and the wound is covered with healthy granulations, the edges may with every advantage be brought together as advised by Gruber, and stitched after cocainization.

The good effects of the operation generally show themselves speedily by the disappearance of the local pain and the reduction of temperature. This has been shown by the observations of Schwartze, Chatellier, and Schubert. The condition of the tympanum is often improved by this operation, in spite of the fact that there is no communication between the abscess and the middle ear. The discharge of pus diminishes and the membrane may cicatrize. This was shown in the case of the wife of an advocate under the care of Dr. Eisenschitz, in whom the discharge ceased on the third day; the membrane healed and the hearing power returned. This is the usual result, but occasionally disturbances of hearing accompanied by tinnitus may persist for some time.

The ability to operate on mastoid abscesses is not so necessary for physicians practising in large towns, where there are skilled specialists at hand, as for the country practitioners, who have to treat them on their own responsibility. There can be no doubt that many of the fatal cases of influenza occurring in the country have been due to the complication described, no operation having been performed, and the death having been attributed to pyæmia or meningitis. Such cases should be treated satisfactorily by any practitioner who is *au courant* in the fundamental principles of modern surgery. In these influenzal cases the operation is much easier than in mastoiditis following chronic suppuration of the middle ear, in which the antrum has often to be opened at a considerable depth, at the risk of injuring the important structures in its neighbourhood (lateral sinus, facial nerve, horizontal semicircular canal). If in such cases the operation should only be practised by a specialist, the opening of post-influenzal mastoid abscesses is within the competency of all practitioners, who may in this way save the lives of their patients. This, however, can only happen when a knowledge of otology is made officially obligatory by the faculties of medicine.

DISCUSSION.

Dr. LADREIT DE LACHARRIÈRE shared Professor Politzer's views on the necessity of surgical intervention whenever the mastoid process was the seat of osteitis or suppuration of the cells. In a certain number of cases, however, where there was pre-mastoid engorgement or phlegmon, the diagnosis was at first uncertain, and the question was whether one had to do with pre-mastoid phlegmon, or with osseous suppuration, with superficial engorgement. Professor Politzer, in one of his cases, had found himself face to face with a similar alternative. In cases in which there was deep-seated pain, along with a superficial boggiess, Dr. de Lacharrière was in the habit of first separating the soft parts, and of postponing till next day the opening of the mastoid cells. In some cases the latter operation was thus found to be avoidable.

Dr. CHATELLIER considered that pre-mastoid tumefaction afforded no precise indication with regard to the presence of pus in the cells. Either condition might exist without the other.

There are two kinds of inflammatory tumefaction of the soft parts covering the mastoid process. In the one the periosteum and cellular tissue are infiltrated, inflamed, and thickened; it is an osteo-periostitis associated with pus in the mastoid. In the other, the lymphatic gland on the mastoid is swollen, and the cellular tissue surrounding it participates in the inflammation; it is an adeno-phlegmon. At first the gland can be felt rolling under the finger, and of considerable size. It may give a sensation of fluctuation without having broken down into pus. This adeno-phlegmon may terminate in resolution or in suppuration.

The treatment consists in antiphlogistics and loosening of the soft parts (Wilde's incision). If breaking down has commenced, there will be found an anfractuous abscess traversed by fibrous tracts which partition the cavity, but which give way later and leave a single pouch filled with pus. These abscesses are situated outside the periosteum, and the bone is nowhere denuded. The whole cavity should be curetted, swabbed with chloride of zinc (ten per cent.), and dressed antiseptically.

In one case a tumefaction over the mastoid, suggesting operation, was found on incision to be a gland inflamed as described. Removal of the gland, suture, and antiseptic dressing speedily led to healing. In another case the abscess on the mastoid consisted of a large purulent cavity, but when it was opened there was no disease of the periosteum nor denuded spot of bone. The cavity was curetted, swabbed with chloride of zinc, and dressed antiseptically. Six days later the whole wound had healed up. The discharge from the ear ceased, and the patient completely recovered. When one is convinced that the mastoid cavity contains pus, there should be no hesitation in opening it. The operation as now practised is without danger, whereas abstention from it, or its too late performance, has led to the death of many patients who might have been cured if they had been operated on.

Up to the present Dr. Chatellier has trephined the mastoid twenty-nine times; twenty-four recovered, and four died. The latter presented at the time of operation such conditions that the fatal issue was certain. He intends to return to the consideration of these cases when he publishes his statistics.

Dr. LOEWENBERG took up an opposite position to that of Prof. Politzer, and did not admit of trepanation of the mastoid without the most urgent reasons. He had cured all his cases of mastoid suppuration without trepanation since 1879. He employed extensive openings in the tympanum, and abundance of antiseptics. If the pus has got into the mastoid from the tympanum it can get out again. In

attacking the cause of the secretion we diminish it, and the mastoid empties itself. Among us influenza is less severe than in the East. The operation of opening the mastoid is performed less frequently in France than abroad. He has seen in influenza, perforations of the tympanum on mamillary prominences heal up with rapidity. In such grave cases he has adopted a waiting policy, and always with satisfaction.

Dr. GELLÉ congratulated Prof. Politzer on the support his statements derived from the large collection of anatomical preparations and specimens he had exhibited. He was struck with the dissemination and small size of the abscesses described in some of the cases; but this was not an argument in favour of early operation, but the absence of communication between the abscess and the middle ear was brought forward as an unanswerable argument in its favour at the same time. Meanwhile, if it is admitted that in these rapid infectious diseases there is pus in the mastoid cells in a few days, how is the comparative rarity of abscess and its complications to be explained? We must believe in natural resolution and re-absorption of the exudation in a large number of cases, those operated on being quite a minority. Like Dr. Loewenberg he had not had during fifteen years to operate on a single one of the cases he had treated from the commencement with regularity. Further even, although pus was met in a few cells on the early opening of the mastoid, it did not follow that an operative opening was indispensable, and that the exudation might not have disappeared without surgical interference.

Dr. CHATELLIER considered the mastoid operation as of capital importance in some cases. He rose, therefore, with the deepest conviction to protest against the opinion of those physicians who reject on principle this surgical intervention. What should be discussed was not the question of the necessity for the operation, but of the conditions calling for it. He thought the operation was too seldom performed, and in support of this contention related two cases.

In one case there had been symptoms of sub-acute otitis for two or three months, but no sign of mastoid trouble. The patient became attacked with vertigo, and Chatellier, suspecting fluid in the drum, performed paracentesis. A few days later there was swelling of the postero-superior wall of the meatus. Paracentesis was again performed without evacuating fluid. In the evening violent headache, of several hours' duration, was reported, and the mastoid was opened, and found to be full of pus, in which was a movable sequestrum. A few hours later, death ensued.

In another case a physician with acute influenzal otitis recovered apparently in four days after paracentesis. A fortnight later his symptoms returned, the membrane was red and bulging, and the postero-superior wall swollen. Paracentesis evacuated a good deal of reddish fluid. There was little mastoid pain, and no swelling. He advised mastoid operation in case of the affection becoming obstinate or pain supervening. On his further pressing the operation the patient disappeared, and he heard nothing of him till he received the announcement of his death three months later. He was afterwards informed that the patient had sought the advice of another surgeon, who advised no operation. The pains persisted for three months, and one day he fell into a comatose state, and died almost suddenly.

In view of such cases, it can no longer be said that all cases of otitis recover without trephining of the mastoid.

Prof. POLITZER pointed out that, whereas Dr. Loewenberg thought that the mastoid abscess was the consequence of the entrance of pus from the tympanum, it was really occasioned by propagation of the inflammation along the mucous lining. He no longer employs Wilde's incision, but opens the sinus (?abscess cavity) at once. In case of a small abscess he seeks for union by first intention,

otherwise he drains. The more he operates on mastoid abscesses the more he becomes partizan of the operation.

DR. GARNAUT. *On the Therapeutical Use of the Soluble Salts of Bismuth, especially in Otorrhœa.*

In July, 1884, Messrs. Guyon and Depetit placed before the "Société des Sciences Physiques et Naturelles de Bordeaux" a communication on the antiseptic properties of the soluble salts of bismuth. In it they stated that "salts of bismuth can be dissolved by means of acids, or glycerine, or by the formation of double salts, such as the iodide of bismuth and potash. The last have the advantage of permitting the neutralization of the solution while allowing a portion of the salt to remain dissolved. Very small quantities of these when added to putrescible fluid inoculated with living microbes prevent these from developing and from altering the liquid. The minimal dose requisite for the purpose is less than that of boric acid, carbolic acid, salicylate of sodium, chloride of zinc, or even sulphate of copper. *The salts of bismuth have the advantage over several of these substances in not preventing the reactions due to soluble ferments.* These observations have great therapeutic importance, because to a certain extent they explain the effects and justify the employment of salts of bismuth in certain affections."

Subsequently to this communication the author made some investigations, along with M. Dupetit, on this subject, but these were interrupted by the death of the latter, and Dr. Garnaut confined himself to some simple medical observations, concerning which he published a short account before the "Société des Sciences Physiques et Naturelles de Bordeaux" on the 19th of November, 1885, as follows:—
 "MM. Guyon and Dupetit have demonstrated that the soluble salts of bismuth, and especially the double iodide of bismuth and potash, are powerful antiseptics. After having made several experiments, showing that under conditions similar to those under which I proposed to try the iodide of bismuth and potash the salt was not poisonous, I have employed it in a one per cent. solution in the treatment of chronic otorrhœas, ulcers, an anal fistula, a septic surgical wound, and an abscess of the thigh, with caries of the femur. I effected rapid disinfection of the wounds and disappearance or rapid diminution of the pus. All the patients have recovered, or are on the way to do so."

Dr. GARNAUT has since used these salts frequently as a vulnerary and as a topical application. He would recommend the study of their internal use. He tested their toxicity on lower animals without any untoward results. In cases of chronic ulcers the results were very good, but the application was generally painful. The effect on fresh wounds gave evidence of an astringent action. He used it in some thirty cases of otorrhœa—acute and chronic—and obtained the best results in old chronic cases in which there was no caries but obstinate discharge. Equal success was obtained in more or less recent cases with profuse suppuration. It is necessary in these cases to wash out the ear beforehand. When the pus is abundant and fetid there is sometimes produced a black precipitate of sulphide of bismuth, but this causes no inconvenience.

It is evident that iodide of bismuth and potash cannot effect a cure any more than any other drug in the presence of deep-seated caries of the petrous bone, but handled with caution it can render great service, and it has appeared to the writer to be superior to all the other remedies used in otorrhœa—alcohol, boric acid, resorcin, creolin, sulphate of copper, nitrate of silver, etc.

He instils five or six drops, warmed, into the ear (after syringing if there is much pus), of a one per cent. solution. In the rare cases where this causes pain he dilutes it with a fourth part of water. The meatus should be dried out before

the instillation, as an excess of water determines a precipitation of the salt. The double iodide of bismuth and potash may be prepared in solution in the presence of iodide of potassium. The solution must not be allowed to touch metallic instruments as it damages them.

61 VERSAMMLUNG DEUTSCHER NATURFORSCHER UND AERZTE IN HALLE-a-S.

Meetings, Sept. 21 to 25, 1891.—LARYNGOLOGICAL SUB-SECTION.

Presidents, B. FRAENKEL (Berlin), CHIARI (Wien), BRESGEN (Frankfurt-a-M.);
Secretary, R. WAGNER (Halle-a-S.).

CHIARI (Wien).—*On Cysts on the Vocal Bands.*

The cysts occurring on parts of the larynx where there are glands must be looked upon as retention cysts. For the explanation of cysts of the free edge of the vocal bands, and of the cysts which are found in fibromata of the larynx, other causes must be sought. Kanthack believes that they arise from atrophy, exudation, and hæmorrhages. Schroetter believes that they are of the same origin as milary vesicles. The author showed different specimens, in one of which the cyst is formed by a dilated lymphoid space, and a second from atrophy of the connective tissue. The cysts in polypi, as the author has proved by many specimens, are caused by dilated lymphoid spaces. A cyst in a neoplasm can become so large that it appears to occupy nearly the whole neoplasm.

B. FRAENKEL (Berlin) showed *Photographs of Microscopic Specimens: Vertical and Horizontal Sections of the Human Larynx.*

He distinguishes four parts of the vocal band—(1) the region of the anterior sesamoid cartilages; (2) that of the elastic region; (3) that of the cartilage; (4) that of the arytenoid cartilages. He also showed microphotographs of neoplasms and "Singer's nodes."

P. HEYMAN (Berlin) showed specimens of a melano-sarcoma of the nose operated upon by him in 1887. The first recurrence had now taken place after four years. In the other cases published (Michael, Lincoln, Michelson) there was a long interval without recurrence. [The reporter's case, operated upon in 1889, had the first recurrence in March, 1891, a second in November, 1891, and a third in March, 1892. At this time the patient is free from further recurrence, and in good health.—*Rep.*]

BRESGEN (Frankfort-a-M.).—*On the Application of Aniline Colours in Diseases of Nose, Throat, and Ear.* (See the report upon the book of the author upon the same subject in this Journal.)

In the discussion, in which ARONSOHN, KRAKAUER, KAYSER, FRAENKEL, FLATAU, THOST, CHIARI, and BRESGEN took part, most speakers believed that after-treatment, after galvano-caustic operations upon the nose, is not necessary.

METZNER (Halle) showed a *patient tracheotomized twenty-four years ago*, who still wore his canula without any difficulty.

HARKE (Hamburg) showed in the pathological institute a method of *post-mortem examination of the Nose and Appendices* without external malformation of the cadaver.

THOST (Hamburg). *Removal of the Canula and Treatment of Laryngeal Stenosis following Tracheotomy in Children.* A report upon the different causes of impossibility of removal of the canula. The most common cause is granulations produced by badly fitting canulas, especially if they are too small. The inflammation occurring during croup or diphtheria often causes hypertrophy of the mucous membrane, also in places where the canula is not situated. The author showed dilators which he has invented to cure this condition.

HARKE (Hamburg) showed a *Modified Laryngeal Mirror*.

FLATAU (Berlin). *Electrolytic Treatment of Hypertrophic Catarrh of the Nose.* The author had treated a great many cases by electrolysis instead of the galvano-cautery, with satisfactory results.

SCHEINMANN (Berlin). *Treatment of Pachydermia Laryngis.* Characteristic of this disease are the well-known tumours on the processus vocalis; sometimes they are combined with hypertrophy of the posterior laryngeal wall, sometimes this occurs alone. Tumours must be removed by operation. The hypertrophy is successfully treated by the author by brushing with three per cent. acetic acid.

ARONSOHN (Ems) has had good results from inhalation of Ems water.

FLATAU (Berlin) recommends O'Dwyer's tubage.

SCHMIDTHUYZEN (Aachen) showed an *Instrument designed to prevent the falling in of the Ala Nasum.*

R. WAGNER (Halle) showed a *Laryngoscopical Apparatus with Auer's Incandescent Light.*

FLATAU (Berlin). *Treatment of Rhinitis atrophica fetida.* The author recommends that treatment should be commenced by applications of a spray of 15 per cent. of peroxide of hydrogen, insufflation of iodoform, and Gottstein's tamponade, which he performs with gauze dipped in an ointment of iodoform, and later on brushing with iodoform ointment.

P. WAGNER (Halle) showed an *Apparatus for Laryngo-Photography.*
Michael.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

Friday, July 1, 1892.

Mr. LENNIX BROWNE, F.R.C.S. Ed., President, in the Chair.

Election of Fellows, presentation of accounts, &c.

Dr. MACINTYRE (Glasgow) read the notes of a case of *Rodent Ulcer, extending from the Face into the Superior Maxillary Bone.*

William Stevenson, aged sixty-two, mechanic, consulted me some time ago about an ulceration of the face, from which he had long suffered. He complained of severe pain and sleeplessness, and was willing to

submit to any operative measures, as he had undergone a number without marked benefit. So great was the pain, which was constantly darting to the ear and the frontal and parietal regions, that no rest could be got without the aid of sedatives, locally and constitutionally administered.

On examination, an extensive rodent ulcer of the face was seen, extending outwards and inwards so as to involve the floor of the nose, the inferior turbinated bone of the right side, the greater part of the inferior meatus, and nearly the whole right side of the septum. There was an opening on the side of the nostril, between it and the face, where previous destruction had taken place after operation. The whole parts were so diseased and inflamed that it was difficult to make out the full extent of the lesion. The superior maxillary itself was destroyed for at least an inch in the alveolar process. There was no glandular enlargement. The margins of the ulcer were very much thickened and infiltrated, and along the lines of incision of the previous operations there was every indication of more rapid extension of the disease than had hitherto been experienced.

He states that ten years ago, while employed at his occupation, some drops of oil from a lamp burning above him fell upon the side of his face. This left a slight irritation and break in the tissues, which shortly afterwards healed up, but left a swelling the size of a pin-head. After a few months this broke out, and from time to time gave him great pain and trouble, as it would not heal. It was situated just at the angle between the nostril and upper lip. Two years after the injury he consulted several medical men, who ultimately referred him to the hospital, and, after consultation with the dispensary surgeons at the Glasgow Royal Infirmary, he was sent into the house.

There is nothing of importance in the family history. His father died of bronchitis at the age of sixty-eight; his mother is also dead, cause unknown, but she lived to the age of sixty-five. He has one brother and one sister living, aged respectively fifty-two and twenty-eight, both in good health. Two sisters died during youth, cause unknown. He has three daughters and one son living, in good health, ages ranging from twenty-nine to forty-three.

In the middle of September, 1891, I saw the patient in the Royal Infirmary, Glasgow. The soft parts were very exuberant, extremely painful, and causing a great deal of discharge. These were removed, and afterwards a careful examination was made.

Permission having been obtained, on the 28th September the patient was put under chloroform, and the right upper jaw was excised leaving the horizontal plate of palate bone however, and the posterior wall of the antrum of Highmore. An incision was made from the junction of the nasal and frontal bones straight down the middle of the nose, along the lower border of the septum, and then to the left below the nostril, so as to get well beyond the middle line and free of the disease. The upper lip was then split from above downwards so that only one-third of it was left. A second incision, beginning at the inner angle of the eye, was carried below the eyelid straight out to the zygomatic process of the malar bone. A third was taken from the

malar bone down to the external angle of the mouth, so that the soft parts were completely isolated from the normal surrounding tissues. The alveolar processes of the maxillary bones were then divided with a saw, and this was carried straight back to the junction of the horizontal plate of the palate, and the superior maxillary bone. The nasal process of the superior maxillary bone was then divided with the bone forceps, and lastly the zygomatic process of the malar. The upper jaw was seized with a strong pair of forceps, and thus everything was removed, including the inferior turbinated bone, except the posterior wall of the antrum and the horizontal plate of the palate. The diseased soft parts, including the right side of the septum and roof of the nose, were carefully removed with the scissors and knife.

By carefully preserving a small strip of the side of the cheek and lip a piece of tissue was made available for stretching across to take the place of the upper lip.

The patient made an excellent recovery, and at no time was the temperature high. Within a month he was able to leave the hospital, and shortly afterwards the mucous membrane had extended from below upwards, and the skin from without inwards, so as to cover the raw surfaces. Plastic operation in this case was hopeless, as the bone itself was extensively implicated. The great deformity was overcome by artificial means as the report of my friend, Dr. Woodburn, which I give here, will show. (*See Illustration.*) He says:—

“The first part of the process of mechanical restoration was the closing of the opening between the mouth and nose, which was practically one cavity. This was complicated by the unusual dimensions of the aperture, combined with the absence of teeth to serve as an anchorage for any appliance. The latter difficulty was overcome in the first one I made by fitting a plate to the lower jaw in order to carry the ordinary springs used in complete sets of artificial teeth. This served the end in view, but, owing to the cicatricial state of the buccal structures, they were a source of great discomfort. In the present one I discarded the use of springs, and depended solely upon a perfect adaptation to the remaining part of the palate and the nasal cavity; the walls of the latter were lined with vulcanite in continuity with the palatal obdurator. This nasal portion was made hollow, and serves the purpose, anatomically and physiologically, of the antrum cavity, and also acts as a fixing point for the artificial face and nose piece. With this the patient has perfect comfort and enjoys comfortable deglutition, very distinct articulation, and so, notwithstanding its many imperfections, is the *sine qua non* of his material existence.

“The unsightly appearance presented by the immense loss of the structures of the nose and cheek was next to be overcome. This was an opportunity of exercising some mechanical turn of mind, combined with artistic effect. I took an impression of the parts with plaster of Paris, extending it beyond the limits of the lesion, and from that, having made a cast, I modelled in wax something like the counterpart of the perfect side of the face. This, again, was cast in zinc and a die made, on which was stuck a piece of metal, again allowing it to overlap the



"outline of the original diseased tissue. I used tin, both from economy, and owing to the only other available metal, aluminum, being liable to be bent by careless handling.

"The manner of fixing this was some trouble, and after trying many methods, I had recourse to the old-fashioned one of fixing with the aid of spectacles, selecting those with long arms reaching behind the ears. They were rivetted to the front of the metal nose in such a position that when the whole was in place the tension of the spectacle arms brought tension to bear in all directions equally, so that in any position of the head the artifice was immovable. Thus it is, and yet can be removed by the patient, and readjusted at will with the greatest ease. This face piece an artist friend painted the tint of the surrounding healthy skin. The line of the apparatus, which nearly touches the everted conjunctiva of the remains of the lower eyelid, is obscured by having the eye-pieces made of coloured glass, and the line which lies on the small piece of lip is hidden by an attempt at a false moustache, the hairs of which have been taken from the patient's whiskers, and fixed with varnish.

"Such briefly is what I have done for the unfortunate man, and although my work falls far short of being perfect, yet it has enabled him to resume his avocation, and take his place among his fellow men minus the consciousness of being an object of horror and pity."

The patient, since the operation, has suffered no pain whatever. He has rapidly gained in strength, and is now able to walk perfectly well. With the aid of the false palate made by my friend, Dr. Woodburn, he can speak and swallow as well as he ever did. Up till now there has been no recurrence of the disease. Previously he had been operated upon under chloroform thirteen times, but the disease rapidly recurred after each successive operation.

Dr. SANDFORD asked what was the appearance of the floor of the cavity on recovery.

Dr. MACINTYRE said the cavity granulated over from the skin inwards, so that there was perfect tissue throughout, although the cavity was of enormous size, and through it the epiglottis and other deep structures could be distinctly seen. It had gradually covered in below with mucous membrane, and above with skin, so that all pain had been done away with.

The PRESIDENT reported a case of *Cesophageal Obstruction by a Dental Plate. Extraction three and a half years subsequent to the accident.* (From notes by Mr. Wyatt Wingrave.)

W. T., a man aged thirty-six, engaged as a civil service writer at the Woolwich Arsenal, came under the care of Mr. Lennox Browne at the Central London Throat and Ear Hospital on May 20th, 1892, complaining of difficulty in swallowing and alteration in his voice.

The history was to the effect that three and a half years ago, whilst drinking a glass of water, he swallowed a vulcanite plate with two artificial teeth. He "distinctly felt it go down and stop at the windpipe," but it did not interfere with his breathing. He immediately consulted one of the surgeons attached to the Arsenal, who, failing to either force the foreign body down or to remove it, sent him to St. Bartholomew's Hospital,

where several attempts were made under chloroform to remove the plate, but unsuccessfully. It was then "forced down," as he was told, into the "lower gut," and he was ordered to carefully examine his motions, *which he has always since done*. This was in December, 1888.

Soon after leaving the hospital he noticed a change in the character of his voice, which for two months entirely disappeared, while for the last two years it has been more or less "husky."

Difficulty in swallowing dates from the accident, but during the last few months it has considerably increased, and has now become actually painful, "everything seeming to stop halfway down," and causing occasional fits of coughing, during which some "stinking matter" was expectorated. His breath has lately been very unpleasant, and he is never free from the sensation of a disagreeable taste and smell.

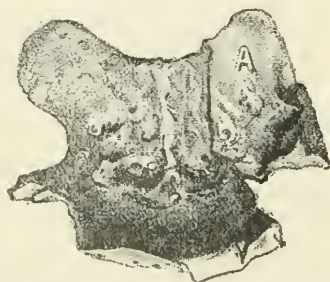
On admission he spoke in a very husky voice, and deglutition was obviously attended with considerable difficulty and pain.

Laryngoscopic examination revealed fixation of the left vocal cord in the position of adduction, otherwise the larynx was healthy, and there was nothing abnormal to be observed in the pharynx.

On passing an œsophageal bougie, resistance was first met with about eight inches from the teeth, but the bougie eventually passed to a distance of fourteen inches.

At the first exploration by Mr. Lennox Browne a foreign body was struck with a metal-tipped bougie, and apparently localized at a point about two inches below the level of the cricoid cartilage to the left side, where it was distinctly felt by external manipulation.

On May 21st, the patient having inhaled chloroform to the extent of relieving spasm but not to narcosis, Mr. Lennox Browne dislodged the plate by means of a "coin catcher," and an assistant grasping the throat so as to fix it, he succeeded in drawing it into the pharynx, when it was grasped by a pair of crocodile forceps and removed.



On examination a recent fracture was seen, indicating that a portion had been left behind, the correctness of this surmise being quickly proved by the immediate removal of the remaining portion by means of an "umbrella probang." The attendant hæmorrhage was very slight.

Subsequent history: Pain rapidly diminished; the temperature, which was 101.2 F. on the day before the operation, fell to 99.8 in the evening of the removal of the foreign body, and became normal the day following. The patient was discharged on May 28th.

Remarks by Mr. LENNOX BROWNE: On November 28th, 1890, I exhibited before this Association a plate of teeth, which had passed into the larynx during an epileptic fit in sleep, and had been in that position unknown to the patient and unrecognized by any medical man for twenty-two months, the patient being told that it had evidently been vomited, the vomiting, however, having really been due to their presence.

In the present case also, the patient had been wafted into a similar fool's paradise by the surgeon assuring him that the foreign body had been dislodged, as was eventually proved, on quite insufficient ground. It is also to be noted that another surgeon, rightly diagnosing that the foreign body was still there, had given an opinion that œsophagotomy was the only means of affording relief.

Surgically the interest of the case is, first, that no greater harm had been done to the healthy tissue by the impaction of the foreign body, especially considering its jagged features, and secondly, the rapid and complete recovery so soon as the cause of obstruction was removed.

An additional point of interest is the service rendered by localization of the site of the foreign body on external manipulation, a procedure which had been previously neglected, and the important aid which was afforded by digital pressure and support during the operation of removal.

Mr. MAYO COLLIER showed a patient suffering from *Stenosis of Larynx*. He said that he had ventured to exhibit this case, as one of considerable interest and some rarity. The woman was twenty-nine years old, was married when twenty-one, and had three children born dead, and two miscarriages. She had sore throat three years ago, continuing more or less ever since. There was no other evidence of syphilis. The husband was apparently healthy, and in her case there was no suspicion that the symptoms were due to disease of congenital origin. The upper opening of the larynx now was extremely narrowed, but symmetrically so, giving it the appearance of the faucial opening. A well-marked papilloma was also present on the left ventricular band.

Mr. Collier suggested the relief of the stenosis by, first, removal by means of a snare of a fragment of the epiglottis which remained, and then by the use of the cutting dilator.

Mr. G. STOKER observed that with regard to the use of the snare, he did not think its use was indicated or advisable in respect of the small projection which in his opinion was the remains of the epiglottis. If the fragment was not able to discharge the functions of that structure in their integrity, it might nevertheless fulfil them in part. He agreed, however that it would be an advantage to cut the bands laterally.

The PRESIDENT said the case was very similar in laryngoscopic appearance to one under the care of Dr. Orwin, the details of which were set forth in the chapter on lupus in his (Mr. Browne's) work. A great deal of mischief might be done in lupus without the patient being made aware of what was going on, but it was rare to see such an amount of mischief from syphilis without some previous subjective and objective evidences of either pharyngeal or laryngeal ulceration, and in this respect the case was almost unique in his experience. As to treatment, prior to any attempts at dilatation, he advised the performance of tracheotomy; for

though the patient was not now suffering in such a way as to justify that operation, attempts at dilatation, or an intercurrent laryngitis, might at any moment render it necessary under circumstances of urgency less favourable to its performance. He agreed with Mr. Stoker that the remains of the epiglottis ought not to be removed, but one never knew what might be the value of such remnants in aiding the healing process.

Judging from the illustrations of syphilitic stenosis by Schroetter the pathological process in this case had followed the usual course of events, viz., by a gradual diminution of the lumen. Cohen had in his book the picture of a case which might almost be accepted as a portrait of the one before them.

Should the author employ dilatation, the President hoped that he would give his cutting dilator a trial. This instrument presented the advantage of being made as a hollow tube, through which the patient being able to breathe, indication was afforded where the instrument was going, for when it was in the right direction air came through the tube. Moreover, by this means the discomfort of the procedure was greatly reduced.

MR. WYATT WINGRAVE showed the following *Microscopic Specimens*.

The three slides illustrated some different forms of epithelial growths occurring in connection with the tongue and pharynx.

No. 1, taken from a private patient of Mr. Lennox Browne, is a typical example of stratified or squamous cell epithelioma, commencing in the superficial epithelium of the faucial tonsil. It is by no means as rare as text-books seem to indicate.

Nos. 2 and 3 are both from the Central London Throat and Ear Hospital. The first shows an early stage of columnar epithelioma, commencing in the crypts of the lingual tonsil, and not in the ducts of Salter's or Henle's glands. Many of these crypts are lined with "rod" epithelium. This specimen was taken from a case of Mr. Jakins, in which the growth commenced in the pharyngo-glossus, and subsequently invaded the upper larynx.

No. 3 is an extremely rare form of stratified epithelial growth devoid of cell nests. It was removed from the oro-glossus by Mr. Jakins, and strongly resembled a rodent ulcer. Five months afterwards there were no signs of recurrence.

The PRESIDENT observed that the first case was one of stratified epithelioma of the tonsil, in which he removed a small portion of the growth for microscopical examination. As soon as the malignant nature was made out, the consent of the patient was obtained to a radical attempt to remove the growth by external incision, with previous ligature of the external carotid. This was done by Mr. Pepper. Unfortunately, fatal secondary hæmorrhage took place eight days later. Although less than a week had elapsed between removal of the fragment and the operation, it was surprising what activity the growth took on. From a mere warty fringe it had become a large angry patch of ulceration, and even between the operation and death there were signs of recurrence.

Dr. MACINTYRE.—*On the Etiology of Affections of the Upper Respiratory Tract.*

Last year I had the honour of introducing the subject of bacteriology in relation to the study of diseases of the nose and throat, and as the Council were good enough to request me to give a paper this year, I have attempted once more to bring up some points of interest in the same subject for consideration.

Perhaps it may be useful to make a reference to our point of arrival in the last paper. We dealt first with the general facts bearing upon this magnificent field for study and observation; secondly, we devoted some time to the consideration of the results following the introduction of micro-organisms into the tissues; thirdly, we took into consideration the principles upon which we may find methods of treatment before or after the bacteria have been introduced into the living tissues. To make these points more fully understood a reference was made to the history of the causal association of these organisms in disease; the classifications in vogue were briefly referred to, the physical characters, chemical composition, forms and distinguishing features were as fully considered as it was judged expedient in the time at our disposal.

The second part of our paper was devoted more particularly to the consideration of three things. First, the finding of parasites in apparently healthy persons; secondly, micro-organisms which might have something to do in maintaining the healthy economy; and thirdly, a reference to the diseases which we as specialists find particularly interesting to study in the upper respiratory tract.

Since then brilliant work has been done in many departments, and the literature is full of suggestions for treatment; confirmation of the views then referred to are being received on all hands, and there is a gradual tendency in every branch of medicine and surgery to give more attention than has ever been paid in the past to etiology.

To-day we will first make some further observations upon the micro-organisms found in the upper respiratory tract, with special reference to the methods of investigation at present at our disposal, and we will afterwards refer to the occurrence of particular organisms which have special bearing upon the work to which we are devoting ourselves. The first part of our work will, therefore, be an amplification of that gone over before, *viz.*, a reference to the bacteria which are generally found in the oral and nasal cavities.

Most investigators in this department, as in almost any other department of medicine and surgery, before beginning the actual study of disease, desire to make themselves fully acquainted with the conditions which occur in the normal structures, because as pathological investigations are but a continuation of the study of physiological processes, so the study of pathogenic bacteria must necessarily be that of the physiology of micro-organisms. As long as tubercle remains outside of the animal tissues, it is purely a matter of biological investigation. As soon, however, as the organism is admitted to and begins to act upon the tissues of an animal, the pathological studies begin. Reasoning in this way, not a few investigators have done much to discover the micro-

organisms which are usually found in the upper respiratory tract of healthy subjects ; and, unfortunately for the advancement of this very complicated subject, a large number of observers have overlapped each other's experiments, so that less has been done than might have been, had small parts of the subject been taken up by each and exhausted thoroughly. To put it more plainly, were our scientific knowledge so advanced that every micro-organism could be classified, its form distinguished, and its life-history recorded, so that at any time it could be distinguished from any other organism, just as we classify the different plants in the higher vegetable kingdom, matters would be comparatively easy. Unfortunately, however, so little do we know about these organisms, that their proper place even in the organic kingdom has not yet been found ; and further, many bacilli are indistinguishable by microscopic appearances from each other. A great deal, however, has certainly been done to aid us in diagnosis by careful study of all their characteristics and properties, but as yet no common basis of investigation can be laid down.

Working upon these lines, a considerable number of investigators have started the study of bacteriological investigations in the nose, throat, and mouth, by attempting to put on record all they have found therein ; but very few have gone far in this way without coming to the conclusion that the great number makes it utterly impossible to overtake the work, or identify each with other known species. This will be easily understood, because the cavities are being constantly filled with air loaded with all kinds of organisms. Moreover, in the food and drink passing through the cavities, great varieties must find entrance. To attempt such a work is endless, and with all the modern armamentaria at our disposal, little can be done in this way by any individual.

With a view, however, of making ourselves as familiar as possible with the organisms which gain entrance to these cavities at different times—for you will sometimes find an organism one day and fail to find it ever afterwards—a number of experiments were made after the following manner:—Over fifty patients were selected, and cover glass preparations were made from a scraping of the mucous membrane of the nose, and mouth and throat. These were stained according to different and approved methods, examined, and carefully set aside for comparison. Again four different tubes were taken for each case. The first was reserved for control experiments, and left untouched. The second was exposed to the atmosphere of the room in which the experiments were made. Thirdly, a sterilized gelatine tube was impregnated with a slight scraping from the mucous membrane of the nose or mouth ; and fourthly, a tube of agar-agar was likewise impregnated. Plate cultivations were made from some of these, and in a considerable number of instances the growth of the organisms was tested on potatoes, etc. Cultivations, of course, were rapidly got in great numbers, and in a very short time it was found to be impossible, as nearly all experimenters have found, to carry such experiments to a legitimate conclusion. The numbers were so great that it became impossible to attempt to record the physical characters, growth, temperature required, production, staining properties, and last of all, isolation and identity with known species

It was so far of use, however, that it made one familiar with the common species found in normal subjects.

Workers in this department, such as Millar, Vignall, Wright, and others, have done good work, and something over one hundred organisms at least have been isolated and described. It will of course occur to most men, that by persistent efforts on the part of different investigators, new forms will be found, until every known micro-organism will have been recorded as having been found in the cavities.

From the above it will be seen that if we were to go on the principle of trying to record all the micro-organisms found in health, in the hope that we might differentiate between them and the micro-organisms found in disease, no progress would be apparent for a very long time to come. The above mentioned experiments were not made with any such intention—the fact was too obvious before beginning—but rather with the object of familiarizing myself with the different species. A moment's reflection, however, will soon show us that we are only experiencing in this department what experimenters have in every other. For example, we can identify a peculiar living organism with tubercle, but the best experimenter is not yet in the position to say that he has a knowledge of the many organisms which may be found in the lungs of the subject afflicted. In other words, we are driven to take up the position of investigating the micro-organisms which are usually present when a person suffers from a particular affection, and if this peculiar organism can be found in a considerable number of cases of persons so infected, and moreover, if the form, chemical reaction, life-history, and other properties correspond, then we may attempt to prove the causal association between this organism and the affection.

Fortunately, in a considerable number of cases this can be done by the approved method, viz., cultivation of the peculiar organism after isolation from all others; secondly, the introduction of it into the living tissues of a healthy animal; thirdly, the discovery of it in that; fourthly, the production of the same disease; and lastly, the re-cultivation of the organism outside of its body, and the identification of this form with the organism found in the patient originally suffering from the disease. In other words, however much we might desire an intimate knowledge of all the forms found in health, the only practical method at our disposal is to search for the association of peculiar organisms in a specific affection, and then by experiment to prove its causal association.

Under the microscope micrococci (probably micrococcus of sputum septicæmiæ) will be seen. These were found in the nasal cavity, probably observed by many others, and impossible to identify with round forms found by others, which grow rapidly in gelatine media, and which under the skin of animals grow and rapidly produce swelling, œdema, and painful symptoms, which disappear in a few days. Again, in the microscopes will be found specimens of bacilli very commonly found in the nostrils, which of course may have been observed by others. A considerable number of the above, if cultivated upon suitable media and injected into the living tissues of animals, are found to be pathogenic. In health, probably owing to the struggle for existence and destruction of each

other—probably also to the different temperatures in the mouth, or to the power which the living tissues possess of destroying these enemies to health—they are comparatively harmless. We know that certain organisms can be tolerated in these cavities, which, were they to gain access to the circulation, might prove dangerous to the host. A practical illustration of this will suggest itself to the surgeon in the manner in which bites from apparently healthy persons act on the injured part. It is a well-known thing that a bite is an exceedingly difficult wound to heal, largely owing to the fact that the organisms produce great irritation.

This is no new idea. Stricker gives the history of the idea that human saliva produces poisonous results under certain circumstances, and points out that authorities from the earliest times believed in and observed this fact. Within the last twelve years, however, it has been attributed to the presence of micro-organisms. Raynaud, Lannelongue, Pasteur, Roux, Fraenkel, and others, made inoculations with the saliva and with cultivations, and produced death in animals—particularly in rabbits.

Any attempt to classify the organisms found in the upper respiratory tract into pathogenic and non-pathogenic is difficult, because it must be evident that, while they are harmless at times, or in certain individuals, they may become dangerous under altered circumstances.

For purposes of demonstration I have placed the following under the microscope :—(1) *Leptothrix buccalis* (these include the forms classified by Miller as *bacillus buccalis maximus*, *leptothrix buccalis maxima*, *iodococcus vaginalis*, *spirillum sputigenum*), *micrococcus prodigiosus*, *micrococcus tetragenus*, *hay bacillus*. Also the bacilli of lactic acid, green pus, *pyogenes aureus albus*, the *streptococcus erysipelatis*, tubercle bacillus (Koch), and diphtheria (Loeffler's); pneumonia (Fraenkel and Friedlander), *micrococcus* of sputum septicaemia. These are all interesting to anyone engaged in the study of the etiology of the affections of the upper respiratory tract, and there are others to which we must refer, such as syphilis (Lustgarten), even if the causal association be doubted; also the organisms found in cases of rhinoscleroma. That mycosis of the pharynx is not to be ignored the paper by Dr. H. B. Hemenway, in the JOURNAL OF LARYNGOLOGY for February, proves. The higher developed fungi are less common, but are sometimes present, as the aspergilli, and, more rarely in man, actinomycosis. Lastly, we are greatly indebted to Miller for his interesting work on the colour-producing bacteria, although these are more useful in the study of dentistry.

I may now be allowed to refer to some pathogenic micro-organisms found in clinical observation, and to draw a few inferences from these.

Suppurative Processes.—A patient was sent to me some time ago by Dr. Carmichel, of Glasgow. There was a sinus leading from the bridge of the nose at the junction of the frontal and nasal bones into the nasal cavity. The patient explained that some weeks before he received an injury from a piece of wood by a thin spike of it being driven through the nose, giving him at first very little trouble, but great annoyance afterwards. There was marked stenosis in both nostrils, and a constant discharge on the face; the sinus was difficult to heal. On making an ex-

amination of the nostril, it was evident an active periostitis was going on. The mucous membrane on both sides of the septum was intensely inflamed and separated from the bone. It was also evident that there was an accumulation of pus, because the mucous membrane of the septum was pushed outwards on both sides so as to come in contact with the tissues of the middle turbinated bones. An incision was made inside the nostril after using cocaine, and a large quantity of foetid pus discharged. The bone itself was destroyed to the extent of half an inch. This was removed by the electric trephine, resulting in complete perforation of the septum. The wounds were treated antiseptically, and the patient made a good recovery. The external sinus healed within a week.

In the discharge abundant evidence of the staphylococcus pyogenes aureus was found. When the patient called some time afterwards these had disappeared.

Secondly, a patient was sent to me on 18th May last, by Dr. Clark, suffering from nasal stenosis. There was no injury in this case. He was under the impression that he had nasal polypus, and suffered mostly from an offensive smell from the left nostril. On examination it was easy to make out that we were again dealing with a large sac of fluid which had separated the soft tissues from nearly the whole side of the septum on the affected side. An opening could be found at the upper part admitting a probe, and out of this a small quantity of foetid pus would be expressed on pressure of the sac from below. A free incision caused the evacuation of a large quantity of pus, and in it there was abundant evidence of the pressure of the staphylococcus pyogenes, and also the bacillus pyogenes foetidus. As the case improved, which it rapidly did, these organisms disappeared.

These two instances may be taken as types of others which came under my observation in which the micro-organisms of suppurative processes evidently have been intimately associated. In thirteen patients noted lately, I have detected these organisms—four of them affections of the antrum of Highmore where a free opening was made—and it is interesting to note the opinions of others on these points. For example, Hajek is referred to in the recent paper published by Dr. Potiquet on the canal of Jacobson. This author, keeping in mind the large number of organisms found in the nasal cavities, says that affections such as perforating ulcer are most likely caused by the entrance of the staphylococcus and streptococcus pyogenes into the depths of the glands. One cannot help thinking of the results possible owing to the frequency with which these organisms are found in the upper respiratory tract, and particularly in the so-called cases of idiopathic abscess occurring even as low down as the larynx. That they are frequently present in healthy subjects is a matter of common observation. Is it unreasonable to assume that they are really the cause of many such cases?

Erysipelas.—Some years ago my attention was drawn to the subject of erysipelas occurring in the nasal fossæ. One of my colleagues had a patient in the general hospital, suffering from hypertrophy of the mucous membrane on both sides of the nostril, which had extended to the skin

round the margins. The deformity resulting in the enlargement of the nasal organ had induced the patient to seek aid. The case appeared comparatively simple, and the hypertrophied parts were removed with scissors. No difficulty was experienced in controlling the hæmorrhage, and the operation was performed with careful antiseptic precautions. I was extremely astonished to learn from the operator that on the fourth day after the operation erysipelas sprang up, which passed into the nasal cavity downwards to the naso-pharynx, and that death had resulted. The operator was a most careful and experienced surgeon, and there was no erysipelas in the hospital at the time. Secondly, another operator in the same hospital, with a comparatively easy operation for the removal of a portion of a bone from the face and opening into the antrum, had a similar experience. There can be no doubt whatever as to the care exercised in this as in the former case. It was at a date two years later than the first-mentioned case. Thirdly, an old lady, over seventy years of age, consulted me something like four years ago for nasal polypi. Owing to her age her medical adviser had not deemed it expedient to interfere, but as the discomfort became greater, after consultation it was decided to remove the neoplasms. One great difficulty, however, was she was afraid to have any operation performed, as she had had three attacks of erysipelas of the face within seven years, each time causing great constitutional disorder, and as she put it, combined with the discomfort of the nostril, almost proved too much for her. The operation was successfully performed in the left nostril, and great care was exercised as to the cleaning of the cavity before and after each operation. Before the right nostril was done she received a message to go to the north of Scotland, and the operations had to be arrested. She did not return, as promised, and three months afterwards a severe attack of erysipelas set in on the *right* side, which had not been operated upon, a fact which pleased me considerably, because had it affected both sides her friends might have been inclined to associate the sequelæ in some way with the operation. Careful examination of the discharge revealed the presence of organisms which, in form and after cultivation, left no doubt we were dealing with the streptococcus of erysipelas. Fourthly, a patient, aged sixty-eight, came to me two years ago suffering from a severe discharge from the antrum of Highmore. The case was evidently one of chronic suppuration in the same cavity. The discharges were carefully examined, and found to contain micro-organisms (a specimen of which we see under the microscope), corresponding in form and arrangement to that usually associated with erysipelas. The organisms were easily cultivated in gelatine and agar-agar, although the growth was not very rapid. My intention in this case was to open into the antrum, and to have the parts carefully washed out, but owing to weak heart and other reasons, he was afraid, and refused to undergo the ordeal. Some little delay took place in giving his consent and four months afterwards he called to state that he had had a severe attack of bronchitis which had terminated with a sharp attack of erysipelas, beginning in the affected nostril and side of the face, and followed with every indication typical of the disease. There was now a more profuse discharge, and in it the same organisms were found.

In two other cases I have made similar observations. One of these particularly struck me, occurring in a young man, twenty-three years of age, where the erysipelas caused intense swelling of the external parts, oedema in the nostrils, and ultimately a pharyngitis, with subsequent post-pharyngeal abscess of a very acute type.

The question arising from the above mentioned cases will naturally be, are not a considerable number of abscesses in the nasal cavity and antrum of Highmore, and even post-pharyngeal abscess, due to the organism of erysipelas? I think there is fair room for assuming that there is an association, and even causal association, and at least it is deserving of further consideration and thought. Are we to assume in these cases that there was accidental infection from the outside, or were the organisms causing this affection or their spores lying latent in the cavity, and only waiting a suitable opportunity for development? Possibly both explanations may be true, but it seems a reasonable position to take up that in the cases of recurring erysipelas they were most likely stored therein. In any case the practical application lies in the fact that all such cases require careful antiseptic treatment before, at the time, and after operation. Similar observations have been made by others. Dr. Luc, of Paris, reports a case of empyema of the antrum of Highmore, caused by erysipelas, and in the discharges he found typical organisms.

Diphtheria.—No pathogenic organism is more deserving of our attention than that of diphtheria, and I may be pardoned for once more bringing this before you. Since its discovery by Klebs, Loeffler's great work, and the discoveries of Roux and Yerson by producing typical paralysis in animals, not only with the germs but with their products, great attention has been paid to it. In our last paper we referred to the best methods of obtaining and cultivating the same. During the year I have made a number of observations, and in something like thirty-eight per cent. bacilli, corresponding to that described by the above-mentioned writers, were found. This is by no means so frequent as some observers state, but, on the other hand, I have not been as favourably situated for observation as many, and that for a simple reason. It is my habit when seeing cases of diphtheria, in consultation with others, to take a specimen from the false membrane, but we must remember there are many organisms present; that in some cases one is called in at a comparatively early stage, in another at a very advanced stage, and probably once only. In consequence of this, one has not the same advantage as the practitioner who follows the case from beginning to end. Nevertheless, in the proportions mentioned above these organisms have been observed.

Other workers have since last year given other results. Dr. Baginsky found Loeffler's bacillus sixty-eight times in ninety-five cases of diphtheria. He makes an important note likewise; that of twenty-four cases which gave the impression of true diphtheria, and in which the bacilli were not found, only one died. Dr. Tangl believes after investigation that the bacillus is of a certainty the cause of the affection. Dr. Retter found it in twenty-nine cases of eighty-two examined. In this department Drs. Welch and Flexner have contributed excellent work on the relation of the pseudo-bacillus to the true diphtheritic organism.

With such a consensus of opinion as to the true nature of the disease, and the importance of careful differential diagnosis between real diphtheria and conditions simulating it, we can no longer afford to ignore the importance of this organism any more than we do that of tuberculosis. This is true of nearly all the affections which we are called upon to treat. For example, an interesting communication on the value of these organisms in diagnosis is made by Dr. Seigl of Britz. An epidemic occurring in over three hundred persons was investigated from a bacteriological standpoint, and the author had no doubt that the microbe found was identical with that of the foot and mouth disease of animals. He describes it under the heading, "Stomatitis epidemica."

To sum up, I have brought some of these facts before you for the following reasons :—

First, to point out the difficulties attending such investigations, and particularly the overwhelming nature of the work in attempting to gain an idea of the organisms found in health and disease, and to seek your aid as far as possible in its continuation.

Secondly, to emphasize the extreme importance with some examples from clinical observations, and particularly the lessons to be drawn from a careful observation of the work which has been done by so many, not the least of which is that, inasmuch as the upper respiratory tract is full of micro-organisms, non-pathogenic and pathogenic in nature, extreme care and cleanliness in antiseptic precautions must be insisted upon.

If I were asked for a reason to justify the existence of such an association as this, and for the special study of this department, I think I should select the recent treatment and advances made in the study of the etiology and pathology of catarrh. The healthy tissues are able to look after themselves, but when we reflect that the great proportion of people suffer in some form or another from catarrh—acute, sub-acute, and chronic—and moreover when we consider that this catarrh leads to impairment of function, and so in a greater or lesser degree to abrasion of the tissues of these parts, we are driven to the conclusion that the barrier between health and disease is constantly being broken down, and must afford an entrance to these organisms. That they do enter the tissues we can show from the last photograph put upon the screen, for which I am indebted to Dr. Thomas Reid, Glasgow. In it the mycelial spores are seen developing within the tissues of a sarcoma of the choroid. That inoculations from weak points are constantly taking place could easily be demonstrated, but this I must defer to another occasion. I trust to put facts before the Society which have taken years to collect, but which may be sufficiently convincing to prove by actual demonstration that even tubercular disease, and when I say tubercle I might add many other chronic affections, is too often thus fatally admitted into the system.

The PRESIDENT expressed his sense of the thoroughness of the paper which they had just heard. At the same time, from its very nature, they could hardly do more than listen with admiration to the truly remarkable results which the author had obtained by long and painstaking research, and as he had remarked with regard to the same author's previous paper, few present were able to discuss it off-hand, for

much time was needed even for its full digestion. The case of the lady who had developed erysipelas in the nostril, not affected with polypus, showed not only the importance of antiseptic precautions in operations, but also that of the open nostril for the ordinary purposes of health. It was a daily experience to find that relief of one much obstructed nostril was followed by such benefit that the patient became almost hypercritical, and would suffer from distress in a nostril which had previously appeared clear and had been doing all the work of nasal respiration. The presence of so many micro-organisms in the mouth was largely explained by the fact that the majority of persons breathe through the mouth instead of through the nose ; and the circumstance that any one of these organisms, though primarily innocent, might become pathogenic, was a fact that could not be too strongly insisted on. With regard to the case of diphtheria in which the disease was transplanted to the intestines and proved fatal, he mentions that he had recorded one such case in his book. Unfortunately, no *post-mortem* was permitted, but Dr. Wilson Fox, who had seen the child, agreed that this was what had taken place.

Mr. MAYO COLLIER wished to second a vote of thanks to the author of the admirable paper. He thought the paper was indeed worthy of a greater society than theirs, and he suggested that it would have commanded respect if read before the Royal Society. Personally he knew nothing about bacteriology ; he could only admire the author's abilities in this direction, and wonder how he could find time for such research. Such a paper conferred a service on the profession at large, and he hoped the author would not limit his remarks to that society : it would be welcomed at any society in London.

Mr. BENDELACK-HEWETSON said the paper was particularly interesting to him, because at the Glasgow meeting of the British Medical Association he had drawn attention to the fact that operations for cataract were occasionally followed by rapid suppurative processes, the cause of which could never be made out. His own extreme precautions in operations for cataract had been laughed at, but when he stated that pathogenic micro-organisms from the operator's own mouth were undoubtedly projected into the eye during the operation, setting up the processes which ended in panophthalmitis, just as they would if cultivated in gelatine, more attention was paid to his warnings. Whether as general surgeons or as specialists, they ought to take home with them these all-important truths, which showed how quite accidentally a surgeon might be the means not only of causing the failure of the operation, but also of causing the death of the patient.

Mr. BENDELACK-HEWETSON (Leeds).—*The Relations between the various forms of Nasal Stenosis and Deafness.*

The subject, he said, had occupied his attention for several years, and he had been gradually developing it. The number of observations when he first broached the subject, however, was not very great, not sufficient to enable him to sum up the results ; but now, with a more extensive number at his command, he was enabled to speak more definitely than was formerly the case. Since he first called attention to the correlation

of nasal stenosis and deafness at the Leeds Meeting of the British Medical Association, he had added considerably to his stock of information. Going into the subject broadly, he had been endeavouring to find out what was the cause of nasal stenosis. He had found it associated with a narrowness of the jaws, leading to crowding of the teeth, elevation of the palate, etc. Then he proceeded to inquire into the causes of this narrowing of the modern face, the ultra refined face, with this result. He had been assisted in the matter very greatly by Mr. Henderson Nichols, a neighbouring dentist, and, together they had come to these conclusions :—That the result was, speaking broadly, a devolutionary process going on in the bones of the face, due probably to the fact that civilized men partook habitually of a much softer food than that which fell to the lot of savage man. By reducing thus the demands upon the muscles of mastication, they became less powerful, and when muscles became weaker their attachments to bone became less strong, and the bones themselves, no longer having need of the same strength, became less developed. Speaking broadly, therefore, they had come to the conclusion, supported by dentists generally, that there was a strong probability of this devolutionary process being due to the difference in the food, and that nasal stenosis was caused by the alterations in the bones of the face as a whole. To bear this out he had examined the jaws of the people who did eat very soft food, and who did not exhibit this tendency to formative degeneration of the facial bones. These people, of whom he had examined a large number, were in the first instance coal trimmers, men who were for the most part rescued slaves from the Zanzibar coast. They were magnificently formed men, and he had never found any of them exhibiting even in the slightest degree a tendency to nasal stenosis. Then he had examined Hindoos engaged on the P. & O. line. These men fed on hard lentils and curry, and they suffered from none of these conditions.

On his last visit to Morocco, he had carried on the inquiry on a much larger scale among the Arabs, and the same remark held good. They all had beautifully arranged mouths, good teeth, and no nasal stenosis. Although he had examined a large number, he had not alighted upon a single instance. What, then, was the result of the mouth-breathing caused by nasal stenosis? These effects could be seen in any child who, in consequence of nasal stenosis, breathed constantly through the mouth. There were thickened, enlarged tonsils, a stinking condition of the mouth; an ideal nest for the micro-organisms described by Dr. Macintyre. Such a child never from its infancy had a proper nasal sanitation. One result was that the thorax became narrower. These children became pigeon-breasted, with a stooping gait like that of an old man with bronchial asthma. He hoped one day to be enabled to show them a complete collection of photographs showing what was the condition in these cases, and the extent to which it could be improved by judicious measures.

Other conditions, however, were met with. Dr. Guye, of Amsterdam, had shown how nasal stenosis led to interference with the return of lymph from the brain, and how blockage of the cribriform plate of the ethmoid

bone led to the condition which he had termed aprosexia, in which the drainage of the brain was imperfectly effected. The results in children with nasal stenosis were very remarkable indeed. Someone had observed that a very large proportion of idiot children were mouth-breathers, and though this matter was worth looking into further, it was certainly a matter that called for attention at the hands of such a society.

These premises brought him to the threshold of his subject. He had shown that all these conditions—malformation of the thorax, a defective gait, anæmia caused by defective aëration of the blood and insufficient oxygen, or by the disturbance of the general nutrition caused by sleep being troubled by the respiratory difficulties, the filling of the post-nasal cavity by adenoid growths and pathological micro-organisms, which led sooner or later to abscess of the middle ear or the advent of scarlet fever, because the little patients could not get rid of the mucus that accumulated in the nose—all these, one or several, might be caused by nasal stenosis. The instrument he used resembled a glove stretcher. In these cases of nasal stenosis he always tried to find out first what was the cause of the blockage. One met with patients who had never breathed properly through the nose. In addition to the actual narrowing of the bones, and the approximation of the middle turbinated bones to the septum, there was often a swollen condition of the latter, the effect and not the cause of the stenosis, also blockage by adenoid growths and enlarged tonsils. His object had been to determine by what means one could best restore nasal breathing. If nasal breathing could be restored as a permanent thing, the question of the treatment of the deafness remained to be considered.

Now, although Politzer had done so much to assist aural surgery to the front, he feared that on the whole the very brilliancy of his results had tended to obscure and to divert attention from the real nature of the affection. The sudden improvement in deaf persons in whom the deafness was due to conditions such as these, led the practitioner to overlook the exact nature of the conditions underlying his ailment. Personally he did not find much occasion to use Politzer's bag, and his Eustachian catheters lay rusting in the drawer. (In reply to the President he observed that this remark applied principally to children.) He found that by removing the adenoid growths he did some, but not permanent, good. A good deal of improvement, too, followed the removal of the turbinated bodies, but still the benefit was not sufficient. It was this fact that had led to his having recourse to the dilator. Looking at the deafness as a symptom, and not as a disease *per se*, he found that the best test was to ascertain how many seconds the child could keep the mouth shut, usually not more than from ten to thirty, or at most forty, seconds. The success of the operation advised by him was revealed by the fact that children, after having gone through it, could sleep even with the mouths shut. There was a marked change in the temperament of the child, in his features, in his intellect—a change nothing short of remarkable.

When he brought forward these facts at Leeds he could only speak of some three or four hundred cases, but now he could reckon by thousands. He mentioned the case of a child, a mouth-breather, who could not hear

a watch at either ear, there were no adenoid growths, no enlargement of the turbinated bones. He dilated freely, and a marked and rapid improvement took place. Children wore a celluloid tube for seven or eight days to prevent recontraction, and hearing returned even before the tubes were removed. He showed photographs of a patient taken before and after treatment. The next case was practically the same. The child could hear a watch one and a half inches on the right, two inches on the left. Snores loudly all night. The nostrils were dilated, post-nasal growths were removed, and hearing became normal within a month. In another similar case the facial expression had undergone an enormous change since the operation. He admitted that the instrument looked a powerful weapon to introduce in the nose, but he was obliged to use all his force to open properly. It crushed back the wall of the antrum, and then the tubes served to prevent reclosure.

When he first began to practise this operation, it was followed by some degree of fever, but since he had made the patients vomit up the blood that had been swallowed during the operation, and washed out the cavity with weak Condyl's fluid, these febrile symptoms had ceased to manifest themselves. He showed charts of cases showing that practically no rise of temperature took place at present. If the turbinated bones were enlarged he always removed them before dilating, because he did not wish unnecessarily to complicate the operation. At the same time he scraped away all post-nasal adenoid growths when dilating. A very large proportion of the persons who consulted complained of chronic otorrhœa, and these got well within a fortnight, or at most three weeks.

The PRESIDENT asked the author whether he had ever met with any untoward results from this treatment in the shape of suppurative otitis or other evidence of pyæmia?

Mr. BENDELACK-HEWETSON said that the tubes were removed twice daily, and the naso-pharynx washed out with a weak solution of Condyl's fluid. No untoward effects had ever been remarked as the result of the treatment.

The PRESIDENT, reserving further remarks, said he could not altogether agree with the suggestion that curries, lentils, or vegetable diets were harder food or likely to call into greater play the muscles of mastication than the dietary employed by Europeans generally. He suggested that their perfect mastication did not necessitate as much force as the average specimen of meat.

Mr. MAYO COLLIER felt constrained to express his entire disagreement with the author of the paper, both as to his theory that a devolutionary process in the muscles and bones of the face was a common cause of nasal stenosis, and as to his practice of forcible dilatation. As to the first, no particle of proof had been brought forward in support of his contention, and no notice had been taken of his (Mr. Collier's) paper read a few months ago before the Association. In this communication he had placed facts and statistics before this Association which proved beyond doubt that nasal stenosis and all its sequels—the pinched nose, the thin drawn face, the high palate, deformity of the teeth, distortion of the orbits, the difference in size of the nostrils, etc., etc.—were all due

entirely to unduly disposed atmospheric pressure ; moreover, these views met with unanimous approval, or, at least, no dissentient voice had been raised. He had shown that up to the age of seven, nasal obstruction was unknown, because the anterior nares were wide, were on the same level as the floor of the nose, the turbinated bones were not developed, and no erectile tissue was present in the nose. He has further pointed out that at the age of ten to fifteen the turbinated bones developed, and that the cartilaginous portion of the nostril assumed a position below the floor of the nose, and at this period catarrhs and slight injuries were a fertile source of blockage of the nose. He had laid before them cases in which the nostril had been artificially blocked in young animals, and this inevitably led to certain deformities, such as deflection of the septum of the nose, highly arched palates, and irregularity and crowding of the teeth, as well as to chronic inflammation of the nasal, naso-pharyngeal, and laryngeal mucous membranes. With regard to Lascars and Coolies, he had pointed out, giving five or six thousand observations, that aborigines were not so subject to deflections of the septum nasi as Europeans, probably because they led more healthy lives, lived in a more uniform temperature, and were therefore not so much exposed to catarrhs. The author's facts were thus accounted for. Mr. Hewetson had drawn attention to the fact that deafness was often associated with nasal stenosis, but this is exactly what one might expect. By blocking one or both nostrils the posterior nares and Eustachian tubes were chronically being dry cupped, and the openings into the tympanum consequently obstructed. The treatment in these cases was not alone Politzer's bag, but was to open the nasal cavities. Politzer's bag gave relief for a few hours, but by restoring the passages in one or both nostrils the hearing was cured permanently. General surgeons might laugh, but he asserted it was the only way to give permanent relief. He asserted that the majority of affections of the larynx and lungs were due to blockage of the nostril, due, in fact, to the constant dry cupping of the respiratory tract. Passing on to discuss the treatment suggested by the author, he urged that to introduce such an instrument as the one shown them into the nose to force a passage, as they might attempt to force open a blocked gas pipe, was neither more nor less than a barbarism.

The PRESIDENT observed that this was rather a strong expression to use.

Mr. COLLIER continuing, said he felt compelled to speak strongly on a point which appeared to him fraught with danger. He pointed out that in these cases there was usually marked deflection of the septum. In from seventy to ninety per cent. of these cases marked deflection was present. The use of this instrument meant fracture or dislocation of the septum, without any means of keeping the parts in place afterwards. If there happened to be enlarged inferior turbinated bones it meant great injury, which was sure to be followed by sloughing. If polypi were present it meant crushing them, and leaving decaying tissues in the nasal cavity with all the possible consequences. He maintained that, under these circumstances, unless one was absolutely certain as to the

state of the parts, the use of such an instrument was, in his opinion, unjustifiable.

The PRESIDENT pointed out that the author did not recommend its use indiscriminately in every case of nasal stenosis, and Mr. Collier's assertion that the treatment was adopted without a previous diagnosis was gratuitous.

Mr. COLLIER said he had heard no attempt to differentiate between the cases in which it should be used and those in which its use was not indicated.

Mr. BENDELACK-HEWETSON said that the shortness of the time at his disposal had prevented him going as fully into the subject as he would have desired, but as a matter of fact he never used this treatment for polypus nor indiscriminately.

Mr. COLLIER said that he certainly understood that the author advocated the treatment in all cases of obstruction of the nose, and as this was not the case he would withdraw the expressions he had made use of in this respect. He could quite understand that in certain cartilaginous deflections of the nasal septum the instrument might be useful, but he could not admit that the author's treatment was in any sense an advance on the treatment now in use.

Mr. GEORGE STOKER said he was himself a little mixed as to the meaning to be attached to the "devolutionary process" advanced by Mr. Hewetson. He must join issue with the author in respect of his view as to the eating of soft food being the cause of nasal stenosis. He had had a good deal of experience of living among savage races, and he could not admit that the difference between their articles of food and our own was sufficient to explain or account for the absence or presence of nasal stenosis. The savage races ate meat in large quantities, with boiled Indian corn and clotted milk. It was certainly a fact that these people had wonderful teeth, and it was very rare to see anything in the nature of decay, probably because they lived more natural outdoor lives. It was the habits of life that were different and not the food. He had been struck with what had fallen from the author in reference to the use of Politzer's apparatus. He himself was prepared to admit that its use was principally as a means of diagnosis, and as a means of ascertaining what progress the patient was making; he thought it was wrong to Politzerize a patient, and then to send him away with an idea that he had derived permanent benefit therefrom. He had never himself used the instrument shown by Mr. Hewetson. He had not had the courage. Perhaps he might summon up courage in the future in view of the brilliant results claimed for the treatment. He had already resorted to dilatation for nasal stenosis, using for that purpose a large sponge.

Dr. WARREN (Birmingham) concluded that the instrument was not to be used for roughly poking about among the turbinated bones, but laterally outwards from the septum, and, he supposed, gradually. If the instrument were used carefully and quietly, he did not see what harm could be done. He himself was much impressed with the advantage of these blades. He asked whether the dilatation was effected under an anæsthetic.

Mr. HEWETSON: Yes, under chloroform.

Dr. WARDEN, continuing, said he was very much pleased with the celluloid tubes, and he quite appreciated the advantages likely to attend their use. He pointed out that nasal stenosis had only been recognised by that name during the last few years—probably not more than ten or twelve years—and when he first commenced the study of this affection, he had no idea how common it was. He hardly ever examined an ear or throat case now without finding it present more or less. He was also Medical Officer of the Birmingham Ear and Throat Hospital, and connected with the Royal Deaf and Dumb Institution, and there he had made very careful examinations in this respect with the result of finding it to be present in nine-tenths of the cases. Mr. Collier had remarked that Mr. Hewetson's use of this instrument would probably excite laughter on the part of general surgeons, but specialists were probably by this time accustomed to the ridicule of general surgeons. Dr. Warden had been in this department for thirty years, and he found that this laughter diminished from year to year. They, as specialists, had made their influence felt in the scientific world, and that progressive movement was likely to continue. By giving their undivided attention to this branch of medicine they were certain to advance the treatment of these cases. He had no doubt that they had at present taken a standing and a position which would ultimately tend to specialists being the leaders and pioneers of science in their respective department.

Dr. TURNBULL (Philadelphia) observed that it was indeed very important to examine the anterior and posterior nares in cases of deafness. When in doubt he always sent his patients on to a neighbouring laryngologist. He did not understand how it was that there was to be no department of aural surgery at the forthcoming meeting of the British Medical Association, although at Cork and at Glasgow they had large meetings. The throat had very little in common with ophthalmology, but affections of the throat and nose were very closely allied with affections of the auditory apparatus, and it was extremely important that the two specialities should be studied in connection. Adenoid growths, enlargement of the tonsils, deflections of the septum, leading to alterations in the whole contour of the face, produced effects on the hearing as well as on the naso-pharynx. He hoped, therefore, that the society would see their way to extending the scope of their enquiries so as to include otology.

Dr. MACINTYRE (Glasgow) said he felt quite sure that we could render after-treatment of these cases comparatively simple by careful antiseptic precautions. The feverishness in Mr. Hewetson's earlier cases could only be attributed to septic absorption. It might be impossible to keep the parts here as aseptic as in a limb after amputation, but the condition could be approximated by proper antiseptic precautions, and the spores not allowed to develop in the parts. He would like to ask the author of this paper what he intended to do by these processes of dilatation. Did he simply mean to drive the hard structures out of the way? The turbinated bones did not develop until a certain age, and many cases of deafness occurred before that. With regard to the question of general surgeons, he was not inclined to enter into the discussion, but this was quite clear—that physiology had taught us to breathe through our nostrils, and many people did not perform this function properly. Why then should we

not get them to do so if this could be safely accomplished? It seemed to him the true method was to ascertain where the obstruction was, and then to remove it. If the propriety of removal were conceded, he was unable to understand why the hard parts should not also be attacked. He was at a loss to understand why so little attention had been paid to the upper respiratory tract. There was not a regulation, until recently, in our Scotch universities which would force a man to look into the nose or throat; and while he did not blame the man, but the system, it was strange that diagnosis had so long been a matter of making out lesions through the chest wall, which were usually extensive before the cruder methods enabled us to detect them, while much more certain evidence could often be obtained by ocular inspection of the larynx.

The PRESIDENT observed that he was in the habit of insisting that the nose was the front door of the respiratory tract, provided with safeguards in the way of structures for warming, moistening, and filtering the inspired atmosphere, and that persons should take in the air they require through the front, and not through an unguarded supplementary entrance. It seemed absurd to urge such an obvious thing, but it was necessary so long as its importance was ignored. The moment a patient says he has a dry mouth in the morning one may know that he sleeps with open mouth. The author's remarks as to the number of seconds a patient could remain with the mouth shut did not represent the whole of the mischief; patients might be able to breathe with the mouth closed, consciously, or during the day, and yet sleep with their mouths open the whole night. He had already stated that he was unable to agree with the author's prefatory remarks on the theory of nasal stenosis, but he thought that Mr. Collier had attached too much importance to these points of theory, and not enough to the practical part of the paper. As to aprosexia the President mentioned the case of an officer who was working up for Staff College examinations, and who came to him complaining that he was quite unable to apply himself to his work; he was found to be suffering from nasal polypi, but from the moment that this cause of obstruction was removed he brightened up, and was able to continue his studies. Such an event, which happened occasionally in the adult, was common in children, against whom the charge of stupidity or laziness was often unfairly applied. It was a remarkable fact that affections of the naso-pharynx occurred much more intensely after attacks of scarlet fever or measles. On the other hand, he had no doubt that the exanthemata, as well as diphtheria and other acute specific diseases, occurred much more readily and frequently in children who were mouth-breathers. He did not agree with the view that Politzer's bag should only be used as a means of diagnosis. To say that it was only useful as a temporary relief to difficulty of hearing was a mistake; one met with a number of cases in which, after operation, Politzerization was required in order to confirm the cure. He, himself, was in the habit of ordering a Politzer bag for patients, and letting them use it themselves, and he deprecated as strongly as anyone the urgency of frequent visits for the purpose of its employment by the surgeon. He admitted, however, that the ease with which it could be used had led to its abuse, especially by the uninformed general practitioner, who frequently used it as a matter of routine,

without any attempt at diagnosis of the true cause of the Eustachian obstruction, or of the vacuum in the tympanum. With reference to Dr. Macintyre's remarks, he said that he and his colleagues had come to the conclusion that the less one douched the nose after operation the better, for they believed that it was a fruitful source of suppurative otitis. They were now adopting the dry treatment, but while no longer using douches they admitted most absolutely the importance of antiseptics in the after-treatment of all cases of intra-nasal surgery. In regard to the number of cases calling for the treatment of Mr. Hewetson he observed that it was well known that there was no great development of the turbinated bones until puberty, but he had found so frequently that removal of adenoids had led to relief of turgid turbinal bodies that he had come to the conclusion that it was very rarely necessary to do anything to these structures before the age of puberty. The hypertrophic rhinitis, if one could employ such a term for children, was often cured of itself after removal of the adenoids. The same remark applied to the majority of cases of chronic pharyngitis in children.

Lastly, on behalf of the society, he wished to express his admiration of the photographs exhibited by Mr. Hewetson. It was almost impossible to believe in several of them that the pictures before and after treatment represented portraits of the same individual. They had, however, seen similar effects follow removal of adenoid growths, which proved that it was the opening of the nostril that effected the difference, without regard to the particular means employed to attain that end. Finally, he would remind the Fellows that a certain number of children who had been mouth-breathers would continue to be so at night, even after opening the nostrils, unless precaution was taken to support the chin during the period of unconsciousness, until the habit was removed.

On the motion of the President, a cordial vote of thanks was accorded to the author for his contribution.

In reply to a question by Mr. Hewetson, the PRESIDENT said he had always used nasal douches warm, but he now *never* employed them till twenty-four, or preferably, forty-eight hours after operation.

Dr. MACINTYRE pointed out that when there were blood-clots or other septic material, douching afforded the only practicable means of getting rid of it.

Mr. BENDELACK-HEWETSON, in reply, said he did not mind his theories being attacked so long as his facts were fairly treated. The object of his paper was not to force theories upon the society, but to bring before them certain facts which he thought might be considered of interest. He would be glad if any member would take advantage of an opportunity to call and see him operate at the Leeds Infirmary. It was not an operation blindly carried out, but a delicate scientific widening of an abnormally narrowed tract, removing whatever there might be requiring removal. In the case of some children he had shown there were no adenoids nor enlarged turbinated bones, but only narrowing of the nostrils, simple dilatation of which cured the deafness. That occurred with more or less frequency. They often differed on points that were curious, and he suggested that there might be something in the nationality of the patients. In London they had to deal with classes of people who came from widely

different and distant parts, and in these the tendency of the disease differed enormously, as did also the general characteristics. Until they had looked at the same people from the same point of view they were not justified in discrediting what another had said on such matters. In conclusion, he said he would not be dissuaded from pursuing this treatment until and unless it could be shown to be productive of harm, a conclusion which nothing in his own experience tended to justify.

The PRESIDENT, before leaving the chair, offered a few words of thanks to the Fellows for their support during his year of office, and congratulated the Association on the important work which had been achieved.

The following were elected members of the British Laryngological Association :

EDWARD BALL, 2, Part Street, Southport.

G. CHARLES WILKIN, 27, Harley Street, Cavendish Square.

FRANK MARSH, F.R.C.S.E., Paradise Street, Birmingham.

NOTES.

Mr. LENNOX BROWNE has been elected a corresponding Fellow of the American Laryngological Association.

OWING to the great pressure upon our space due to the reporting of several Society Meetings, we are compelled to hold over any abstracts of current literature until next month.

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CONTRIBUTION TO THE QUESTION
OF SO-CALLED CROUP OF THE NOSE

(RHINITIS CROUPOSA ET FIBRINOSA).

By Dr. JOHN SEDZIAK (Warsaw).

DURING this year (1892), in "Gazeta Lekarska" and in "Monats. für Ohrenheilk.," I have endeavoured to show in my paper entitled "Croup, or Diphtheria of the Nose,"¹ based upon one case occurring in the practice of one of my colleagues, that croup of the nose, as an independent pathological process, and as a disease *sui generis*, having nothing in common with diphtheria, does unquestionably exist. This view I based upon a critical and exhaustive research of the whole literature touching upon this question. I proved, and especially from the clinical point of view, that the independence of this pathological process does not permit of the least doubt. About fifty cases of this disorder published between 1887 and 1892 by the most eminent specialists of diseases of the nose (Hartmann, Moldenhauer, B. Fraenkel, Seifert, Bresgen, Potter, Raulin, Baumgarten, Hunt, Jurasz, Schech, and many others) furnished this proof.

From an etiological point of view there is also much in favour of the view that croup and diphtheria of the nose are two entirely different pathological processes. This is proved by the investigations of B. Fraenkel, Leyden, Scheinmann, and lastly, Seifert, who in cases of croup of the nose were not able to discover the Klebs-Löffler's bacilli, now known to be specific in diphtheria. Although Baginsky (resp. Stamm)

¹ Read before a Medical Society in Warsaw, 7th June, 1892.

and Concetti found them in their cases, these are, but single observations, and the question arises if they had not something to do with the so-called chronic diphtheria of the nose. In my opinion the greatest importance in this direction is to be accorded to the experimental investigations which Lieven (*vide* my above paper) performed on croup of the nose. He succeeded in provoking on the injured mucous membrane of the human nose the typical features of this disorder, after inoculation with a portion of the pure culture of micro-organisms (a special kind of coccus), which he constantly found in the membranes in cases of croup of the nose.

Maggiora and Gradenigo (Turin) found in the membranes in cases of this disorder only, constantly staphylococcus pyogenes aureus.

From the anatomical point of view to a certain degree, at least in the opinion of Virchow, croup must be distinguished from diphtheria in general, and of the nose in particular, although it must be admitted that the experimental investigations of Middeldorpf and Goldmann, performed under the guidance of Prof. Weigert in Frankfort-on-Main, seem to contradict this view. My opinion that croup of the nose, though rarely yet unquestionably, exists and differs decidedly from diphtheria in its clinical course, and in the character of the poison (micro-organism), found its confirmation in a new case which I had occasion to observe not long ago.

Mrs. G., twenty-one years of age, the wife of an official, consulted me for the first time on June 8th, 1892, complaining of catarrh and obstruction of the nose which had lasted some days. The patient was at first seen by Dr. Baczkiewicz (who was treating her child), and he kindly sent her to me. The patient related that some days previously she scratched off a crust in the nose on the right side. Some hours after the nose swelled and the acute catarrh appeared, especially localized on the right side. On the morning of the next day the swelling and the pain in the nose increased, and the patient remarked that its right side especially was obstructed. At the same time pretty severe general symptoms appeared, *i.e.*, weakness, general disturbance, chills, and fever (38.6° Cent.). The patient took castor oil and five grains of quinine, after which the general condition amended speedily and the same evening the fever ceased. From this time the patient felt always well, a little weak only. The state of the nose, however, remained without change. In the patient's antecedents nothing was noticed. The patient affirmed that she had up to then always been healthy. On examination I found as follows: the patient was well built and nourished, but rather pale in the face. There was no fever. The lymphatic glands were not affected (although the patient maintained that in the beginning they were enlarged and painful). In the internal organs nothing abnormal. In the pharynx and larynx nothing particular. The nose, especially its anterior end, at first sight appeared swollen and a little reddened. The introitus nasi, especially on the right side, was more swollen and reddened with painful excoriations. The right half of the nose was almost entirely—the left one partly—obstructed. Rhinoscopic examination was rather painful and showed the existence of membranes (on the right side) thick, compact,

whitish, and covering the septum in its whole extent, and also entirely covering the inferior, and for the most part the middle turbinated bodies.

These membranes were bathed in serous-acrid secretion. The mucous membrane of the places not covered with pseudo-membranes was greatly reddened and swollen, without greater changes, however (ulcerations). In the left half of the nose the changes were much less; the membranes were less compact, but of the same character, and limited only to the septum (inferior and anterior part of septum cartilagosum). The mucous membrane covering the remaining parts (conchæ, etc.) was less swollen and reddened, and secretion was less abundant, but its character the same. On examining the naso-pharynx by means of the laryngoscopic mirror (rhin. post.), no membranes, and generally speaking no distinct changes could be found. The ears were healthy. I prescribed wad-tampons with balsamum peruvianum (ää glycerine) and ointment of resorcin (zincum oxydatum acidum boracicum ää 1·0, lanolini 30·0), and I abundantly insufflated the nasal cavities, especially the right side, with pure aristol.

Next day I saw the patient again. The external appearance of the nose was much better; the swelling considerably lessened, and the excoriations healed. Membranes, however, which the patient maintained fell out with the tampons almost every time, were found in the previous places. After a careful disinfection of the nose (4 per cent. ac. boracicum), I took out by means of the sterilized (in the flame of an alcohol lamp) pincette a portion of the membrane from the septum, which was done without any bleeding at all, and the surface of the mucous membrane appeared little changed (without ulcerations). The membrane itself I put in a sterilized tube for further bacteriological researches (inoculations). The other part from the deeper layers of the membrane I transferred to agar-agar (stroke culture) by means of a sterilized platinum needle. Another part of the membrane I squeezed between two cover glasses for the purpose of microscopic examination—the larger part of the thick compact membrane I put separately into alcohol in order to soak it in paraffin. After an abundant insufflation of the nasal cavities with aristol, I ordered the patient the same treatment (bals. per. and resorcin). Next day the state of the nose again amended much—the external appearance did not leave anything to be desired. The membranes, however, formed again in the nose, though much less strongly. The treatment was continued without change (insufflation with aristol). The urine contained no albumen, and there were no complications in other organs. I saw the patient again two days after. She felt quite well. The obstruction of the nose had disappeared in the left half entirely, in the right side partly. The membranes were found only in the right half of the nose, and limited to the inferior part (septum and inferior conchæ). The symptoms of catarrh of the nose were insignificant. The secretion was scanty. The mucous membrane was only a little reddened and swollen. I saw the patient once more some days afterwards, when there was hardly a trace of membrane on the inferior part of the septum on the right side, and no obstruction of the nose. Catarrh had ceased almost entirely. The patient felt quite well. Since that time I have not seen the patient. Some weeks afterwards I heard from Dr. Bacziewicz, and from the uncle of the

patient, that she enjoyed the best of health. The whole process in this case lasted more or less about two weeks. I must here add, that during the whole time of the disease there was not once, as the patient maintains, any bleeding from the nose. Neither I, nor the patient herself, could remark any fœtid secretions from the nose. The child, which the patient did not cease to nurse for a moment, is perfectly well.

I performed bacteriological investigations of this case in the laboratory of the Child Jesus Hospital, under the guidance of Dr. Jakowski, and with his kind assistance. Firstly, I must remark that I was unable to find Klebs-Löffler's bacilli in the membranes or preparations on glass and sections coloured by the usual Löffler method (methylin blue and rose), but found fibrin by the special method of Weigert's lymphoid cells, and a few cocci. On the agar-agar at the temperature of 37°C. (in thermostat), the cultures obtained resembled "*streptococcus pyogenes*" (small vesicles). Under the microscope there were seen under immersion, and coloured by gentian violet, different kinds of cocci (single, in couples, and in short chains). I was obliged to conduct my inoculation experiments, on account of temporary dearth of guinea-pigs, upon a rabbit. This animal, as is well known, is less suitable for the purpose. Along with Dr. Jakowski, I inoculated the sterilized membrane from the nose of our patient under the skin of the back, with all precaution and care (cutting off the hair, and disinfecting with sublimate, ether, etc.). The wound was covered with collodion. The rabbit was afterwards subjected to minute observation in order to convince ourselves that no general or local symptoms had appeared, which could have been taken for diphtheria. For this purpose, during the first ten days, the temperature of the rabbit was measured, three times daily—in recto—every two to three days the urine was examined, and the state of the lymphatic glands in the neck was observed. I shall not give here the detailed temperature chart. I mention only, that during the first five days the temperature was normal, *i.e.*, did not exceed 39.0 C, the normal temperature of the rabbit. The animal was lively, and ate with appetite. No albumen in the urine, and no swelling of glands occurred. The wound on the back healed. Only on the sixth and seventh days did the temperature rise a little (between 39.0° and 40.0°C.), and the rabbit seemed depressed a little, but soon recovered, and the temperature fell to normal, and did not rise any more. The animal has been quite healthy up to now, more than one month. No paralysis occurred. The wound completely healed. There seems from the above to be no doubt that in this case we had to do with croup of the nose (rhinitis crouposa and fibrinosa), or, as some American authors call it, pseudo-membranaceæ. In support of this view is the clinical picture of the disease: slight and shortly lasting disturbance of the general state, absence of swelling of glands, typical membranes, want of any symptoms in the naso-pharynx and pharynx or ears, absence of secondary paralysis and other diseases (kidneys), absence of contagious properties; in one word—the benign character of disease *par excellence*. On the other hand, in favour of the croupous character of the disease is the result of the bacteriological examination (inoculation of membrane in the rabbit with negative result).

TONGUE, PHARYNX, &c.

Jackson, Chevalier Q. (Pittsburg).—*A satisfactory Tongue Depressor.* "Med. Rec.," May 7, 1892.

THIS is made of one piece of steel. The tongue-plate is hollow underneath (to hold the moist tongue by atmospheric pressure), and the handle is long and bent so as to be held by the patient without the hand interfering with the view of the throat.

Dundas Grant.

Williams, W. R. (Preston).—*Excision of the Tongue.* "Brit. Med. Journ.," Jan. 2, 1892.

REFERRING to a paper of Mr. Hutchinson's, where this author states : "(1) I have lost only a single patient, so far as memory serves me, in twenty 'years' practice ; (2) I have come to regard excision of tongue as a "procedure that does not really involve any risk to life."—Mr. Williams replies by giving statistics of fifty-four cases with nine deaths. Mortality = 16.6 per cent.

William Robertson.

Morton, C. A. (Clifton).—*Tuberculous Ulceration of Tongue.* "Brit. Med. Journ.," Jan. 9, 1892.

TUBERCULOUS ulcer on the tip of the tongue of a man aged fifty-five, also suffering from pulmonary and laryngeal phthisis and tubercle of one epididymis. Tubercular bacilli were found in the lesion, which contained round and giant cells, in the latter of which bacilli were numerous. In the discussion that followed the speaker referred to having met with many cases of tuberculous lingual ulceration, in some of which that affection appeared to be the initial tuberculous lesion. The mode of infection by the tongue, probably effected by bacillary sputum acting on abrasion of the tongue, due to jagged teeth.

William Robertson.

Coolidge.—*Tubercular Ulceration of the Hard Palate and Gum.* "Boston Med. and Surg. Journ.," May 5, 1892.

THIS lesion occurs on the gums around the upper front teeth and on the hard palate just behind them. Its appearance is that of a coarse granular ulceration, deep red and often raspberry like. The edges of the ulcer are not elevated, and the bone is not attacked. The author believes that it may be the bridge by which lupus or other tubercular disease may pass from the throat to the nose or *vice versa*. The ulcer shows no tendency to heal and runs a very chronic course, more like lupus than tuberculosis, as we see it in the pharynx and larynx. Removal of the teeth is an essential beginning to treatment, which consists in curetting and the application of the galvano-cautery.

B. J. Baron.

Morrison, A. (London).—*Improved Tonsil Guillotine.* "Brit. Med. Journ.," Jan. 16, 1892.

THE handle is placed more towards the centre than in Mackenzie's instrument, and, again, the fenestra is oblong instead of round, as is

generally the case. [A good instrument is certainly a desideratum, but it is difficult to see where the advantages of this modification lie. The majority of operators use both hands in working the instrument—the one hand to firmly press the instrument over the tonsil, the other to propel the cutting blade; hence the value of a long, effective reach in the instrument. Besides, the long axis of the fenestra is here at right angles to the long axis of the majority of tonsils met with.—ABSTRACTOR.]

William Robertson.

Norbury.—*Sulphide of Calcium or Calx Sulphurate in Tonsillitis.* "Therap. Gazette," May 16, 1892.

ESPECIALLY useful in acute parenchymatous tonsillitis in strumous subjects. Frequent doses of $\frac{1}{8}$ to $\frac{1}{2}$ gram are best. If the tonsillar abscess has to be opened, peroxide of hydrogen, to which has been added a little oil of cassia, is very useful as an antiseptic wash or spray. *B. J. Baron.*

Wroblewski (Warsaw).—*Contribution to the Pathology and Therapeutics of the Lingual Tonsil.* "Gaz. Lekarska," 1892, Nos. 12, 13, and 14.

THE most frequent disease of the so-called "fourth" or lingual tonsil is hypertrophy, along with which we very often meet with phthisis. It generally gives rise to symptoms of a foreign body in the throat, and to impediments of singing and speaking. The treatment consists of brushing with solutions in slighter cases, and cauterization (chromic acid, galvano-cautery snare) in the severer cases. The author further speaks of acute processes of the lingual tonsil. 1. Tonsillitis lingualis acuta, of which he reports seven cases. 2. Mycosis leptothricia, a comparatively frequent disease, as he has had occasion to observe it in eighteen cases. He advises two remedies—first, successfully applied by himself in this obstinate disorder, namely, brushing with pure cal. iodo.; and secondly, gargling with decoct. of tobacco. Besides tuberculosis, the author has met with syphilis and, in one case, cancer; finally, with foreign growths (papilloma and cysts) of the lingual tonsil.

John Sedziak.

McGuire, C. M.—*A Case of Tonsillitis.—Tracheotomy.—Death.* "Medical News," May 14, 1892.

THE patient, a poorly nourished female child, eight months old. Temperature 100° Fahr., pulse 120, respiration 30; no abnormality in lungs or fauces. The right parotid gland was somewhat swollen and tender. Two days later the gland was found much more swollen, and the left gland was also somewhat enlarged; the right tonsil was swollen and congested; no white patches, no membranous exudation, and no hoarseness were observed. Four days after the commencement of the illness the right parotid gland was so swollen and indurated as hardly to allow opening of the mouth. At this time both tonsils were seen to be much enlarged. The condition of the patient became so serious that during the night tracheotomy had to be performed. At first the child breathed easily, but in the course of a few hours artificial respiration had to be resorted to. Twelve hours after the performance of the operation the heart's action suddenly ceased. No fluctuation could be discovered

in either the parotid gland or tonsil. The author draws attention to the rarity of inflammation of the tonsils appearing secondarily to inflammation of the parotid gland.

W. Milligan.

Baber, C.—*Lymphoma of the Tonsils*. "Archiv. of Otol.," Vol. XXI., No. 2.

THE patient, a girl aged fourteen, was admitted into hospital suffering from what appeared to be enlarged tonsils of two years' duration. They were removed by means of the guillotine. Shortly afterwards, however, several new hypertrophied portions had to be removed from the right tonsil. Before admission she had suffered from swellings in the groin. Shortly after this she again returned to the hospital with the tonsils greatly enlarged, the right tonsil presenting an irregular surface, with ulceration upon the right anterior pillar and adjacent parts of the palate. Portions of the growth were again removed. The cervical, axillary and inguinal glands were enlarged. The patient shortly after this became very emaciated, and masses of enlarged tonsillar tissue had again to be removed. The patient subsequently died of pneumonia. The day before her death all the enlarged glands disappeared. Microscopic examination of the portions removed during life showed a well-developed reticulum, with large numbers of endothelial plates, and with numerous lymphoid cells in the meshes. The appearances presented were those of lymphadenoma.

W. Milligan.

Grønbech, A. C. (Copenhagen).—*Treatment of Chronic Pharyngeal Catarrh*. "Ugeskrift for Læger," 1891, No. 331.

THIS article deals principally with the etiology and treatment of pharyngitis chronica. Amongst the etiological circumstances the author mentions that he has seen the disease frequently amongst typographers, even in cases where there were no signs of lead-poisoning—(which might be easily explained by the fact that the working rooms of printing offices, as a rule, are dusty and overheated.—H.M.) As far as the treatment is concerned he lays great stress upon the treatment of eventual diseases of the naso-pharynx.

Holger Mygind.

Heryng.—*Pemphigus of the Mucous Membrane of the Pharynx and Larynx*. "Nowiny Lekarskie," 1892, No. 5.

MANDELSTAMM reports the following characteristic features of this disorder:—(1) On the mucous membrane of the oral and pharyngeal cavity, as on the epiglottis, appear greyish or white strongly marked spots, of the size of a hemp seed, or of a pfennig. These spots may disappear in one place and appear in another. (2) There is no fever. (3) The disease is very obstinate; treatment is without effect. Heryng reports six cases (three of his own, and three of Elsenberg's), of which two occurred in females between forty and sixty years of age. The last four cases were in males, from fourteen to forty. Two cases were lost to sight after a short time. The remainder died from general exhaustion or disease of the lungs. All cases terminated in death, and general pemphigus appeared in four to six months after appearance of the process in the pharynx.

John Sedziak.

Rice.—*The Troublesome Symptoms caused by Enlargement of the Epiglottis, and the advisability of reducing the size of this Cartilage by Operative Measures.* "New York Med. Journ.," April 9, 1892.

CERTAIN troublesome symptoms—fulness in the throat, voice fatigue, violent paroxysms of coughing, tickling, vomiting, and glottic spasm—are at times caused by an enlarged, congested, irritable epiglottis. In most of these cases the enlargement of the epiglottis has been caused by an hypertrophied lingual tonsil, removal of which will afford relief. In other cases, however, the epiglottis has become so enlarged as to rub against the lateral and posterior walls of the pharynx. The author has found that astringent applications have no effect in causing reduction in its size. He advises removal of the hypertrophied portions with suitable instruments. *W. Milligan.*

Witthauer.—*Case of Retro-pharyngeal Abscess.* Verein der Aerzte in Halle-a-S., Meeting, Mar. 1, 1892.

A PATIENT, thirty-two years old, had a large swelling in the pharynx, and especially of the posterior pharyngeal wall. Pressure on the left side of the neck was painful. In the evening dyspnœa began, and the laryngoscope showed œdema of the glottis. Treatment with ice. Some hours later sudden extreme cyanosis and dyspnœa; tracheotomy; death. The *post-mortem* examination showed an abscess on the vertebral column, beginning in the retro-pharyngeal space, and pointing in the region of the sixth tracheal cartilage. The cause of the abscess was not discovered. Death seems to have been caused by debility of the heart. The case must be looked upon as one of cryptogenetic septicæmia. *Michael.*

Campbell, D. S. (Detroit). *Eight Cases of Œsophageal Stricture.* "Med. Rec.," June 11, 1892.

THESE cases—seven recent and one old—made good recoveries after electrolytic treatment. He reported them before the surgical section of the American Medical Association. No particulars appear in the "Record's" report. *Dundas Grant.*

NOSE, NASO-PHARYNX, &c.

Dessar, Leonard A. (New York).—*A New Nasal Electrode.* "Med. Rec.," May 28, 1892.

THE leads are fastened together by metal [bands insulated by means of ether (*sic*) fibre, asbestos or ivory, instead of binding threads. They can thus be soaked in antiseptic solutions without damage. *Dundas Grant.*

Heryng (Warsaw).—*Electrolysis, and its Application in Diseases of the Nose, Throat, and Larynx.* "Przegląd Lekarski," 1892, Nos. 1, 2, 7, 8, 11, 12, and 13.

AFTER a few preliminary remarks as to the subject and action of electrolysis, and to historical facts in regard to the application of this method in

therapeutics (Crusel, first ; later on, Voltolini, Kuttner, etc.), the author proceeds to the description of electric batteries and auxiliary instruments. Further, he describes his own experiments with electrolysis. The first trials the author made in the pharynx—namely, in cases of hypertrophy of the tonsils—were, however, not encouraging. Still less efficacious was electrolysis in diseases of the nose, as, for instance, in hypertrophy of the turbinated bodies and deviations of the nasal septum. In one case even perforation of the septum took place. In one case of syphilitic stenosis of the naso-pharynx the author successfully applied electrolysis. In all, he has applied this method to twenty-seven cases, of which twelve were laryngeal ; eleven, cases of tuberculosis. The author further reports detailed histories of five cases of laryngeal tuberculosis, in which electrolysis proved to be fairly satisfactory. He concludes that in this disease, although the method is efficacious, it cannot take the place of surgical treatment.

John Sedziak.

Editor of the "Medical Record."—*Coryza and the Axis of Astigmatism.*
"Med. Rec.," June 4, 1892.

REFERENCE is made to a case cited in the "Post-Graduate," in which a patient suffering from coryza was cured by the correction of his astigmatism. If the axis of the astigmatism became improperly rotated the coryza reappeared. The "Record" twits the ophthalmologists on their enthusiasm, and suggests the possible substitution of cylindrical glasses for aconite, Dover's powder, etc., in the treatment of coryza.

Dundas Grant.

Frank (Wien).—*Osteoma Orbitale et Nasi—Extirpation.* "Internat. Klin. Rundschau," 1892, No. 26.

A PATIENT, twenty years old, had for two years a tumour in the right orbital cavity. For six months there existed obstruction of the nose. Temporary resection of the nose and extirpation of the tumour was followed by cure.

Michael.

Srebrny and Bujwid.—*A Case of Rhinoscleroma.* "Nowiny Lekarskie," 1892, No. 3.

A PATIENT, forty years of age, complained of dyspnœa, which had lasted for three months. Obstruction of the left nostril had lasted a year. On examination a great hypertrophy of the left inferior turbinated body, of osseous consistence, was found. In the larynx, under the true vocal cords, two thick walls of a strongly red colour were seen. At first the author made a diagnosis of the so-called "Stoerk's blennorrhœa," basing his diagnosis upon the symptoms typical of this disorder. The treatment was—irrigation of the nose and inhalations, with methodical dilatations of the larynx. For the bacteriological examination (Bujwid) the anterior end of the inferior turbinated body, and a growth from the inferior left nostril, hitherto not observed, were cut off. Typical bacilli of rhinoscleroma were found. The author draws attention to the diagnostic significance of the cultures of these micro-organisms on agar-agar. It is

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typical, and the growth appears the next day, while the examination of the sections gives sometimes negative results, being generally difficult.

John Sedziak.

Knight.—*Cyst of the Middle Turbinated Bone.* "New York Med. Journ.," Mar. 19, 1892.

THE cyst was removed with the cold wire snare and cutting forceps under cocaine. The two theories advanced in explanation of this condition are : (1) That it is the result of a rarefying osteitis similar to that occurring in the long bones. (2) That it has its origin as an osteophytic periostitis, secondary to a hypertrophic rhinitis. The cyst is often multilocular, and contains air and mucous or purulent fluid.

Unless it is so large as to cause pressure or impede nasal breathing it is seldom necessary to interfere. The cold wire snare is recommended, especially in large cysts with associated polypoid growths. Schmiegelow punctures with galvano-cautery and removes the walls with cutting forceps and scissors.

B. J. Baron.

Kibbe, A. B. (Seattle).—*A Case of Asthenopia and Headache due to Hypertrophy of the Middle Turbinated Bone.* "Med. Rec.," April 23, 1892.

A MAN of thirty had for nearly a year been unable to read or use his eyes for close work without a sense of weariness. A slight hypermetropia, and an insufficiency of the external recti, were corrected without improvement. There was deviation of the septum into the right nostril, and enormous hypertrophy of the left middle turbinated body, not materially diminished by cocaine. Removal by means of a snare gave immediate and lasting relief.

Dundas Grant.

Hunt, J. Middlemass.—*Abscess of the Antrum of Highmore.* "The Liverpool Med.-Chir. Journ.," July, 1892.

In this paper the author refers to the two main views held by the profession as to the origin of antral disease—the first, that antral disease is generally secondary to nasal trouble ; the second, that it is the result of dental caries. In the author's experience the so-called classical symptoms, (1) distension of the antrum, (2) swelling of the cheek, (3) infra-orbital pain, (4) escape of pus on lying on the sound side, are, as a rule, conspicuous by their absence. The one constant and all-important symptom is the presence of a purulent nasal discharge coming from the concavity of the middle turbinate, and escaping either by the anterior or the posterior naris. Pain is, as a rule, present, and is generally intermittent in nature and supra-orbital in position. As regards the intra-nasal condition, diffuse hypertrophy of the middle turbinate, polypoid degeneration or even true polypi in the middle meatus, hypertrophy of the mucous membrane in the neighbourhood of the hiatus semilunaris, bare bone in the middle turbinate or at the ostium maxillare are to be found in most cases. The author regards it as justifiable to open the antrum in any patient with unilateral purulent discharge coming from the concavity of the middle turbinate in its anterior half, and constantly or at times ill-smelling, if there be no obvious cause for the discharge inside the nose itself, such

as a foreign body or specific ulceration. He does not regard the transillumination of the antral cavities by means of Voltolini's electric lamp, placed in the mouth, as of much practical importance, although in a doubtful case it may at times be useful. Exploratory puncture carried out through the middle or inferior meatus with a Pravaz syringe, or a Lichtwitz's trocar and canula, is a more reliable method. For purposes of treatment the best plan is to open the antrum from the alveolar process, either through the socket of a tooth which has been removed or from the alveolar border. A metal tube should be inserted in order to keep the opening patent. Opening from the lower meatus, while it has the advantage of preventing the entrance of food particles into the antrum, and of keeping the purulent discharge from entering the mouth, has the great disadvantage of not allowing thorough drainage, as the opening is not situated in the most dependent part of the cavity. *W. Milligan.*

Chiari (Wien).—*The Results of Treatment of Empyema of the Antrum of Highmore.* "Prager Med. Woch.," 1892, Nos. 22, 23, 24.

THE author records the histories of twenty-eight cases treated by him, and gives the following results of his experience:—(1) In very rare cases the empyema caused by periostitis of the root of a tooth can be cured by extraction of the root alone. (2) Sometimes cure follows frequent irrigations of the nose. (3) Injections into the antrum also, if regularly made, sometimes cure the disease, but sometimes only improve it. (4) Only recent inflammations can with certainty be cured by a few injections. (5) Successful injections by the ostium maxillare could only be made in one case. (6) The best way to obtain successful injections is an opening through the alveolus. (7) Insufflation of iodoform is of uncertain effect. (8) The communication between the antrum and mouth must be closed. (9) The best method is tamponing with iodoform gauze, repeated every week. (10) The tampon must be introduced, if possible, by the opening through the alveolus. *Michael.*

Laker (Graz).—*Large Endo-Nasal Tumour totally Extirpated through the Choanae.* "Archiv für Ohrenheilk.," Band 32, page 211.

THE author pressed the tumour, which was situated in the lower and middle nasal passage, by forceps into the retro-nasal space. It was then removed through the mouth. *Michael.*

Sokolowski (Warsaw).—*On the Relation of Post-Nasal Growths to the so-called "Enuresis Nocturna."* "Gaz. Lekarska," 1892, No. 4.

SOME authors, as Major, Bloch, etc., following Hack's theory, maintain that "enuresis nocturna" depends on the presence of post-nasal growths. The author, basing his opinion upon one case observed by himself, regards the connection of both these diseases as very problematic. A schoolboy, ten years old, suffered for a long time from obstruction of the nose. He had also since childhood "enuresis nocturna." After operation upon the post-nasal growths the permeability of the nose was established. At the same time enuresis ceased. It, however, appeared again after two weeks in full strength. Repeated scraping of the rest of the growths had not any

effect upon the enuresis. The author supposes that the temporary arrest of enuresis nocturna in this case had its origin in the neurotic shock, produced by fright, and partly by pain, during the operation.

John Sedziak.

LARYNX, &c.

Solis-Cohen.—*The Voice*. "Internat. Med. Mag.," April, 1892.

AFTER some interesting paragraphs on sound, and how it is produced, and on the qualities of the human voice, the author tells us of various defects of vocal utterance that lead to troubles which come under the notice of the throat specialist.

1. Pitching the voice in too high a key. The chest portion of the register is the proper one to use, especially in men, but not its very lowest portion.

2. Speaking too loud.

3. Speaking too rapidly. Sound-waves require a certain length of time to travel from one end of a room to another. They undergo deflection, and deflection from the walls of the room, and verge towards the centre of the apartment, where they become irregularly mixed with the direct waves, thus creating confusion of sound, which does not subside on the instant their utterance ceases. Due allowance must be made in all cases for the resonance of the room, and time given for its subsidence.

4. Giving too much time to the consonants, and too little to the vowels. Rest at intervals, and after a hearty meal, is insisted on. Sipping water in small quantities is good for dryness of the throat when speaking.

B. J. Baron.

Stewart, Donald (Nottingham).—*Laryngeal Papilloma*. "Brit. Med. Journ.," Jan. 2, 1892.

A SUB-GLOTTIC growth, the size of a pea, removed entire by Mackenzie's forceps. Specimen shown.

William Robertson.

Keller (Freiburg).—*Tuberculosis of the Posterior Laryngeal Wall*. "Münch. Med. Woch.," 1892, Nos. 23, 24, 25.

THE author has applied Killian's method of examination of the posterior laryngeal wall in many cases, and has found that by this method the pathological processes of this region can be seen earlier and better than by the usual method. He then discusses the symptoms of the disease without bringing forward anything new, and concludes with a recommendation of energetic surgical treatment.

Michael.

Stein (Berlin).—*Tracheotomy in Laryngeal Tuberculosis*. "Deutsche Med. Zeit.," 1892, Nos. 46, 47, 48.

THE author commences with a complete report upon the literature of the application of tracheotomy to laryngeal phthisis, then relates two cases of phthisis somewhat improved after the operation, and recommends the

operation, not only in cases of asphyxia, but also for treatment of the disease.

Michael.

Strauss (Berlin).—*Lues Tarda Laryngis in Children*. "Archiv für Kinderheilk," Band 14, Heft 1.

IN the polyclinic of B. Baginsky, which has been visited by two thousand patients during eight years, only three cases of this affection have been observed: (1) A child, seven years old, hoarse three weeks. The laryngoscopic examination showed great infiltration of the epiglottis and the false vocal bands. The affection was very similar to tuberculous affections, but an exostosis of the tibia proved its syphilitic nature. (2) A patient, twelve years old, had cicatrices in the pharynx, swelling of the epiglottis, and ulceration of the posterior laryngeal wall, which was covered with greyish-white secretion; the vocal bands were also deformed. (3) A patient, twelve years old, had pain in the throat and some stridor. The whole larynx was swollen. The epiglottis was covered with multiple papillary excrescences, and there was a granulation tumour on the right arytenoid cartilage. Improvement occurred under anti-syphilitic treatment.

Michael.

Scheinmann (Berlin).—*Sub-glottic Sarcoma of the Larynx cured by Intra-laryngeal Operation*. "Berl. Klin. Woch.," 1892, No. 21.

A PATIENT, sixty-six years old, suffered from increasing hoarseness for some months. The laryngoscope showed a tumour under the left vocal band with broad base, situated on the under surface of the vocal band. Intra-laryngeal extirpation. No recurrence for one and a half years. The microscopical examination by Prof. Waldeyer confirmed the diagnosis of sarcoma.

Michael.

Lubliner.—*Stenosis Tracheæ of Syphilitic Origin*. "Medycyna," 1892, Nos. 13-15.

THE author describes the two following cases:—The first occurred in a cook, twenty-four years of age, with whom, on examination with the laryngoscopic mirror, a pretty large stenosis of the larynx was observed. The stenosis was caused by the hypertrophic condition of the cords. The patient was treated with Schrötter's tubes with certain improvement. He came for the second time to the hospital, after six months, with symptoms of considerable stenosis. On the epiglottis (laryngeal surface) cicatrices were found. Anti-syphilitic treatment was tried without effect. The dilatation of the larynx again somewhat amended the state of the patient. After six months the patient died with the symptoms of suffocation, the first day after his entering (third time) the hospital. Autopsy showed numerous ulcers and cicatrices in the larynx and trachea. The second case was that of a shoemaker's apprentice, seventeen years old. Infiltration of the lungs and ulcer of the right ventricular band, and swelling of ligamenta ary-epiglottica were discovered. Under iodide cicatrization of the ulcer and diminution of the infiltration occurred. Dyspnœa, however, became greater and greater. Tracheotomy was performed. After three months death followed. The necropsy showed pleuritic exudation and a cicatricial stenosis of the trachea. Both cases the author

considers to be lues hereditaria tarda. Finally, the author reports another case of stenosis tracheæ, in which transillumination of the larynx helped the recognition of the character of the stenosis. *John Sedziak.*

Heryng (Warsaw).—*On Benign Ulcerations of the Larynx.* "Gaz. Lekarski," 1892, Nos. 7 and 8.

UNDER the term of "angina ulcerosa benigna" the author understands a hitherto undescribed affection, which is characterized by the appearance of ulceration, usually unilateral, generally on the anterior faucial pillar in the vicinity of the tonsil—the ulcer having sharp edges without inflammatory zone, with a base slightly deepened, and covered with a greyish-white secretion, difficult to remove. The length of this ulceration is about one centimètre, and the breadth from six to eight millimètres. On touching it does not bleed, but it is a little painful. After two or three days the ulceration begins to clear, and after ten to twelve days heals without leaving a cicatrix. This affection is usually accompanied by a slight general reaction. It mostly resembles the condition called by B. Fraenkel "angina aphthosa." Bacteriological examinations (Bujwid) showed in the secretion of these ulcers the presence of two kinds of streptococci—namely, monomorphus and variegatus. The former, however, was the only organism constantly present, as was proved by the further investigations of Heryng and Lubliner (cultures—inoculations). The author has had occasion to observe this affection ten times during ten years, in which bacteriological examination was performed in two cases. *John Sedziak.*

Suckling (Birmingham).—*Bulbar Paralysis, with Bilateral Paralysis of the Vocal Cords.* "Brit. Med. Journ.," Jan. 9, 1892.

A MAN, aged forty-three, with urgent dyspnœa, and symptoms of bulbar paralysis. Vocal cords adducted, and on inspiration approximated, causing stridor. Tracheotomy, and death soon after. *William Robertson.*

Solis-Cohen.—*Stricture of the Larynx.* Clinical Lecture delivered at the Jefferson Medical College.

DEALING with tracheal tubes, the author insists on the importance of not inserting a tube large enough to fill up the calibre of the trachea, nor so small as to be sufficiently loose to enable it to press anywhere on the wall of the windpipe. It ought to permit of the passage of sufficient air by the sides of the cannula to set the vocal vaults into phonal vibration.

On no account ought it to be fenestrated, lest granulations grow into them, and lead to difficulty in removal and re-insertion. Other minor points are also alluded to. Nicking the stricture before dilating is recommended. Whilst praising Mackenzie's dilator Cohen objects to it because the pressure is only made at certain points.

To remedy this the author uses an instrument with two flat blades moving upon a hinge anteriorly, and which press on the two sides of the glottis equally, and make an opening similar to the natural shape of the glottis.

Lastly he strongly recommends Schrötter's dilators. *B. J. Baron*

Schmiegelow, E.—*Intubation of the Larynx in Cases of Acute and Chronic Stenosis.* "Hospitals Tidende," 1891, No. 51.

THE author has performed intubation in four cases of croup, the result being three deaths (in a child, aged eight, from acute paralysis of the heart; in a child, aged nine months, from the process descending, and in one, aged eleven months, from pneumonia), and one recovery in a child, aged three. He also performed intubation in eight cases of chronic stenosis, of which six were cases where there was difficulty in removing the tracheotomy tube, while one case was that of stenosis of the trachea, from tracheotomy performed in childhood, in a man, aged twenty-seven, and one case was aphonia spastica. He considers intubation indicated. (1) in cases of acute stenosis, due to œdema of the larynx; (2) in cases of acute stenosis from diphtheria, when there is no time for tracheotomy; or (3) when consent to this operation cannot be obtained; (4) in cases of paralysis of the abductors, or spasm of the adductors; (5) in cases of foreign bodies of the larynx, when there is no time for tracheotomy; (6) in cases of acute stenosis from thyroiditis; and (7) in all cases of chronic stenosis. He also thinks that intubation might be performed in every case of acute stenosis from diphtheria.

Holger Mygind.

Wassermann, Melville (Paris).—*Answer to Tauber's (Warschau) Paper on Extirpation of the Larynx.* "Langenbeck's Archiv," Band 41; "Centralbl. für Chir.," 1892, No. 24.

POLEMICAL article.

Michael.

Wolf, Julius (Berlin).—*On a Case of Total Extirpation of the Larynx.* "Berl. Klin. Woch.," 1892, No. 21.

SEE report of the meeting of the Berliner Medicinische Gesellschaft, of January 13th, 1892.

Michael.

Clegg, W. S.—*Tracheotomy in an Infant four days old.* "Brit. Med. Journ.," Jan. 9, 1892.

THE obstruction to breathing was found due to a large nævoid mass under the tongue, lifting this up and pressing it backwards so as to obstruct respiration. The child survived two days. The author makes some important observations on operating at such an early age.

William Robertson.

E A R.

Cousins, J. W. (Portsmouth).—*Improved Method of Examining the Auditory Canal and Membrana Tympani.* "Brit. Med. Journ." (illustrated), Jan. 16, 1892.

THE improvement referred to rests in the reflector being fitted to the aural speculum along with a convex lens, also fitted to speculum, the latter to aid further clearness, and a head-rest for patient. A questionable addition of apparatus, especially where operation requires to be carried on at the same time.

William Robertson.

Nothers, J. J. (Düsseldorf).—*Traumatic Perforations of the Membrana Tympani.*
 "Zeitschrift für Ohrenheilk.," April, 1892.

OUT of eight thousand nine hundred patients suffering from disease of the ears, forty-two had traumatic rupture of the membrane. Direct perforation (instrument, ear-scoop, match, &c.) occurred in eight of these ; indirect (slap, nineteen times ; discharge of fire-arms, seven times ; fall, five times ; politizerization, twice) in thirty-three. The situation of the rupture was, in the direct cases, in the posterior part. In the indirect it varied, and affected the portion of the membrane which was thinned by previous disease, if any. In previously normal drums the indirect ruptures occurred far most frequently in the anterior half. This is probably due to the greater tension of the portion in front of the manubrium. The ruptures in this region gape more than those in the posterior segment. Inflammatory reaction occurred in all the direct ruptures, but only in twelve of the other thirty-four. In six of these inflammatory cases water or oil had been instilled. The hearing power was lowered in all cases except one, and in general returned to a great extent. In only eighteen was the final result observed, and in thirteen of these the hearing was completely restored. Before healing, the defect in hearing was chiefly confined to the lower tones in the scale, air-conduction was diminished, bone-conduction increased, showing lesion of the conducting apparatus (increased tension from contraction of the tensor tympani unopposed by the fibres of the membrane), and preservation of the labyrinth. [This paper indicates the hopefulness of such cases in the absence of *nimis diligentie*.—ED.] *Dundas Grant.*

Clark, E. S.—*A Case of Injury to the Ear by a Stroke of Lightning, with Perforation of the Membrana Tympani.* "Archiv. of Otol.," Vol. XXI., No. 1.

IN this case the patient, a man aged thirty-four, while riding in a buggy with his wife and child, was struck by lightning upon the left side of the head, the current passing down the ear, along the neck and breast to the right arm, and so out into the metal work of the buggy. Ever since the accident he had been troubled with deafness and tinnitus. On examination, nine months after the accident, the hearing power was found to be c/100. Auricle and external meatus normal. Membrana tympani congested and thickened. In the lower segment of the membrane a perforation, 1·5 millimètres in diameter, was found, the edges thicker and more congested than the surrounding parts. After careful cleansing, dry boracic powder was applied. After a course of a few weeks' treatment, the perforation became completely cicatrized and the hearing much improved. In this case the author says that the drumhead may have been ruptured by (1) the direct stroke of lightning ; (2) the actual cauterization of the entire surface of the external meatus and drumhead, followed by suppuration, this afterwards penetrating into the middle ear.

W. Milligan.

Dench, E. B. (New York).—*Some Suggestions concerning the Prognosis and Treatment of Chronic Non-Suppurative Inflammation of the Middle Ear.*
 "Arch. of Otol.," April, 1892.

DENCH impresses the necessity of endeavouring to prevent exacerbations even in cases in which we can offer no hope of improvement, especially

by hygienic care and naso-pharyngeal medication. He attaches great prognostic value to the results of Rinne's experiment practised with five tuning-forks, each differing by one octave from the one above and below it (*vide* JOURNAL OF LARYNGOLOGY for March, 1892, p. 126), not merely before, but also immediately after inflation of the middle ear. The duration of the disease and the age of the patient also influence the prognosis, but in elderly people allowance has to be made for physiological "presbykousis," viz., the condition met with in people beyond middle life, in which the functional activity of the auditory nerve is to an extent impaired, particularly in reference to the perception of sound by bone-conduction. Bone-conduction in such subjects is not relatively increased in middle-ear catarrh to such an extent as in youth, and we are cautioned therefore against too readily making a diagnosis of nerve-deafness and neglecting treatment of the conducting apparatus. In general, the diagnosis of secondary involvement of the internal ear depends upon complete failure to perceive certain notes of the scale, and also upon an "absolute shortening of bone-conduction."

In regard to treatment, Dench recommends thorough adoption of the appropriate treatment in case of the gouty or rheumatic diathesis, and, in the absence of these, pilocarpin, especially if there is the least evidence of involvement of the receptive apparatus. Applications to the naso- and oro-pharynx, surgical removal of obstructive lesions, such as enlarged pharyngeal or faucial tonsils, deformities of the septum and hypertrophic rhinitis, inflation per tubam with air or medicated vapour, astringent application to the mouth or whole length of the tube, Eustachian bougies, systematic exercise by means of a conversation tube, are all to be tried. If these fail, Dench advises surgical procedure—myringotomy and irrigation, synechotomy, tenotomy of the tensor, permanent retention of the perforation. If simple myringotomy does not improve the hearing, there is no question in his mind as to the advisability of removing the membrana, malleus, and incus. With a movable stapes as little membrane as possible should be excised when extracting malleus and incus, and a union between the membrane and the head of the stapes should be encouraged. When the motions of the stapes are not free its mobilization should be attempted. The removal of the stapes may in the future become practicable. He specially recalls Cholewa's statement that surgical interference upon one ear frequently benefits the ear of the opposite side, and that operation on the worse ear may therefore have an important application. In conclusion, the writer trusts that his readers will not consider that the preparation of this paper has consisted in a collation from literature of every conceivable form of treatment of the disease under consideration. "With scarcely an exception, I have made "a thorough trial of all the means suggested here, and my opinions are "based on the results obtained. With reference to surgical interference, "I can truly say that in no case have I ever seen a bad result follow any "of the operations, either immediately or subsequently, and in nearly all "there has been a certain amount of improvement, either in diminishing "the tinnitus or improving the hearing." [An analysis of a number of cases treated by these active measures, with details as to duration,

result of previous treatment, and the immediate and permanent effect of intra-tympanic surgical interference, would have been far more convincing than these statements, differing, as they do, from the conclusions arrived at by other observers of repute, and we would urge great caution on the part of those who may be sanguine enough to anticipate similar results.]

Dundas Grant.

Blake, Clarence J. (Boston).—*Mechanical Treatment of Tension Anomalies.* "Arch. of Otol.," April, 1892.

IN certain cases (recognizable chiefly in trained musicians) Blake has attributed the symptoms to a relaxed condition of the tympanic apparatus—tensor tympani, malleo-incudal capsular ligaments, etc. The chief symptom was loss of appreciation of the higher tones, such as the upper partials—harmonics—which impart *timbre* to the voice or instrumental sound in all the scale, and the fundamental tones themselves when high in the scale. A violinist, for instance, found that his violin sounded dull to his left ear, and a lady singer got flat on F and F sharp in her upper register. In both patients the outward excursion of the membrane as a whole under Valsalva was exaggerated, and in the lady there was also local relaxation of the posterior segment. Inflation removed the symptom for the moment, and a more permanent effect was produced by the introduction of a strip of india-rubber, three millimètres wide and twelve millimètres long, so placed that the middle of the strip pressed on the processus brevis, while the extremities hitched upon the anterior and posterior walls of the meatus respectively. In a case of circulatory tinnitus, with relaxation, Blake gave relief by the use of the india-rubber strip. He attributes this to counteracting the injurious effect of relaxation of the sound-transmitting apparatus upon the transmission of sound from within outwards. [This communication ought to awaken interest in an abnormality which deserves more attention than it has hitherto received.—ED.]

Dundas Grant.

Scheibe, Arno (Munich).—*On the Pathogenesis of Serous Transudation into the Middle Ear in Eustachian Closure.* "Zeitschrift für Ohrenheilkunde," April, 1892.

THE negative pressure in the middle ear resulting from closure of the Eustachian tube, leads to the simple indrawing of the membrane with its characteristic features. A continuance of the condition is followed by dilatation of the blood-vessels and exudation of serum, along with a few corpuscles. The appearance of fluid in the tympanum may then be recognized. Scheibe examined the fluid in seven cases, with the following antiseptic precautions:—The meatus was syringed out three or four times with a four per cent. solution of carbolic acid, which was left therein for about five minutes. It was then thoroughly dried out with sterile wool through a sterilized speculum. Under such circumstances there was in no case a cultivation obtained, except in one instance in which horny epithelium from the meatus was introduced. Showing the efficacy of the cultivation arrangements, control inoculations of other bacteria gave positive results. From such cases are to be carefully distinguished those

of acute, sub-acute, and purulent otitis, in which micro-organisms abound.
Dundas Grant.

Gradle, H. (Chicago).—*On the Significance of the Odour of the Discharge in the Treatment of Chronic Suppurative Otitis; with Comments on Treatment.*
 "Arch. of Otol.," April, 1892.

GRADLE offers the following conclusions as the result of his experience:—

As long as the pus of otorrhœa smells fœtid, the treatment employed has exerted no curative influence on the disease; and conversely,

The first sign of curative influence of any treatment upon the course of an otorrhœa is its effect upon the odour of the discharge.

He holds that only stagnant pus is fœtid, and that complete cleansing ought to remove the fœtor in uncomplicated cases. Should thorough syringing per meatum, inflation per tubam, and boric and salicylic insufflation not be followed by removal of the fœtor within two days, something more has to be done. He then washes out the tympanum by means of Hartmann's canula, a hypodermic needle tube, or less frequently by Eustachian injections. The removal of pus and cholesteatomatous fragments by the intra-tympanic syringe is often followed by disappearance of fœtor—the harbinger of cure. Polypi and granulations *may* disappear without surgical interference if the odour is capable of being kept down by irrigation and antiseptic insufflations. Similar conditions would justify non-interference with exostoses and caries of the walls or ossicles. In cases of caries the fœtor may sometimes be successfully combated by the instillation of a five per cent. solution of concentrated hydrochloric acid for about fifteen minutes on several consecutive days. Where watery fluids fail to enter all the crevices, alcohol or alcohol with ether may succeed, and an alcoholic ethereal solution of iodoform (with a little salicylic acid) may deodorize pus not otherwise reached. This may be injected by means of a tympanic canula, the pain being relieved by the previous application of cocaine. He finds this more efficacious if the meatus is afterwards filled with antiseptic glycerine and plugged with cotton. He would not consent to any resection of carious ossicles until both hydrochloric acid and iodoform solution, followed by carbolated glycerine, had been thoroughly tried. In case of fistulæ in Shrapnell's membrane, crusts must be removed, the opening enlarged if necessary, and a fine canula introduced for cleansing purposes. The iodoform solution and antiseptic glycerine are useful in these cases. If all these means fail in reducing the fœtor the mastoid cells are most probably at fault.

In all cases of fœtid otorrhœa rendered odourless by treatment, Gradle would promise a cure. In cases of odourless otorrhœa he is more doubtful, such as some non-fœtid cases of Shrapnellian perforation and of tuberculosis. Finally, an otorrhœa may be intractable until nasopharyngeal disease is cured.
Dundas Grant.

Schmiegelow, E.—*Contribution to the Surgical Treatment of Suppuration of the Middle Ear, especially in regard to Suppuration of the Tympanic Attic.*
 "Ugeskrift for Læger," 1892, Nos. 22-24.

THIS article gives first a survey of our present knowledge of the suppurative inflammations of the tympanic attic (recessus epitympanicus)

showing themselves by perforation of the membrane of Shrapnell. As to the frequency of this class of middle-ear disease, Schmiegelow states that he has found perforation of the membrane of Shrapnell in six out of 384, *i.e.*, 1·6 per cent. of acute suppurative inflammations of the middle ear, and in 54 out of 929, *i.e.*, in 5·8 per cent. of chronic suppurative inflammation. Dividing, however, the latter group of cases into two, *viz.*, those concerning private patients, and those concerning outdoor patients of a hospital, the percentage is respectively 13·5 and 2·6, a circumstance which is easily explained by the fact that private patients are examined more minutely and observed for a longer period. In 75 per cent. of the cases observed by Schmiegelow air did not pass from the Eustachian tube through the perforation of the membrane of Shrapnell. The author next mentions the different methods of treatment, all of which have the object of producing free exit of the pus from the attic. He quotes twenty cases where excision of the drumhead, with subsequent removal of the malleus or the incus, or both, was performed, the result being in nine cases complete recovery, in eight amelioration, while in two cases the operation was without influence, and in one the result was unknown. In the cases where recovery took place, this happened from three weeks to ten months after the operation. The condition of the removed ossicula was as follows:—"The malleus was fourteen times the seat of caries, while it was healthy in two cases, and in two other cases the case book did not mention the state. In one case the manubrium only was removed on account of its fracture during the operation. The incus was removed altogether in four cases, and was found in all these to be the seat of caries. In three of these cases it was removed together with the malleus; in one case it was the only ossiculum removed.

Holger Mygind.

Scheibe, Arno (Munich).—*On the Exciting Causes (bacterial) of Bone Disease in the Mastoid Process in the course of Acute Genuine (primary) Middle Ear Inflammation, and especially the Diplococcus Pneumoniae.* "Zeitschrift für Ohrenheilk.," April, 1892.

SIXTEEN cases of primary acute median otitis, unconnected with measles, scarlatina, or diphtheria, and complicated with mastoid bone disease, were bacterioscopically investigated. In nine of these the diplococcus pneumoniae was found, in five the streptococcus pyogenes albus (one with staphylococcus), in one staphylococcus, and in one undetermined cocci without capsules. The frequency of the occurrence of the diplococcus pneumoniae (9 out of 16 = 56 per cent.), as compared with its relative infrequency in cases uncomplicated with disease of the mastoid bone, is remarkable. In thirteen cases not thus complicated, it was found in two (2 out of 13 = 15 per cent.) The other micrococci were found with nearly equal frequency in both the complicated and uncomplicated cases. He considers that there is, therefore, a causal relation between the diplococcus and mastoid complications. *Dundas Grant.*

Guye, Prof. (Amsterdam).—*Two Cases of Bezold's Form of Perforation of the Mastoid Antrum.* "Zeitschrift für Ohrenheilk.," April, 1892.

THIS consists in perforation through the median aspect of the mastoid process, and escape of pus into the deeper parts of the neck between the

layers of fascia in different directions—as, for example, into the retro-pharyngeal connective tissue. Bezold produced this experimentally on the cadaver (“*Deutsche Med. Woch.*,” 1881, No. 28), and Moos (“*Zeit. für Ohrenheilk.*,” 1890, page 47), Kiesselbach (*ibid.*, 1891, page 114), Gorham Bacon (*ibid.*, 1891, page 63), Politzer (Text-book), Hartmann (Text-book), Cholewa (“*Deutsche Med. Woch.*,” 1888, No. 49), and Kirchner (Text-book), described cases.

Professor Guye brings forward several cases. In one there was extensive swelling under the mastoid process, and Guye observed that when he pressed this swelling pus welled up through a bony fistula in the posterior wall of the meatus. A counter opening was made at the anterior border of the sterno-mastoid, and with drainage healing took place. In a second case, after long delay (during which the patient was under treatment by a quack), the mastoid was opened, a swelling underneath was found to communicate with it, as also did a retro-pharyngeal abscess which formed later on.

Bezold's recommendation to open the antrum, break through the median wall and push a drainage-tube into the deep abscess, does not find favour with Guye, who prefers, having opened the antrum, to wait for the abscess in its development to indicate for itself the best position for a counter opening. [Many of those who are not familiar with this form of burrowing of pus will recollect cases, put down probably as cervical cellulitis, for which it offers the only ready explanation.—ED.]

Dundas Grant.

Milligan (Manchester).—*Meningitis following Chronic Suppurative Middle-Ear Disease*. “*Brit. Med. Journ.*,” Jan. 2, 1892.

IN this case, a boy, aged seven years, there was otorrhœa from infancy, and, when examined, aural polypus with necrosis of posterior meatal wall with a sinus leading into mastoid cells; pain over mastoid; temperature 102, with severe cerebral symptoms. The rule to operate first on the mastoid was followed, and pus found and evacuated. Death followed in ten hours. Confirmed by *post-mortem* as due to meningitis, the brain was seen floating on pus. Reference was made to the various channels by which infection can be carried from the middle ear and neighbourhood to the brain, and pointing out in this case that the channel was along the sheath of the auditory nerve.

William Robertson.

Moos, S. (Heidelberg).—*Histological Examination of the Temporal Bones of a Girl who died of Meningitis after being Deaf for Three Years through Scarlet Fever*. “*Zeitschrift für Ohrenheilk.*,” April, 1892.

THE child, aged twelve years, had otorrhœa with deafness and unsteadiness of gait, and occasional pain ever after the scarlet fever. The meningitis affected both base and convexity of the brain with hydrocephalus internus. There were disseminated tubercles in the lungs, spleen and kidneys.

In both bones the tegmen tympani was thickened, the malleus and incus absent (the stapes dislocated in one), the membranes were almost entirely destroyed, and there was epidermoid extension from the lower border of the perforation to the inner wall of the tympanum.

The following were the changes attributable to the scarlatinal otitis :—the destruction of the membrane, and the exfoliation and dislocation of ossicles, spots of necrosis, degeneration of intrinsic muscles, epidermoid and atrophic changes in the mucous membrane. Also the following lesions in the labyrinth : osseous neoplasia in the cochlea, especially the first convolution, with destruction of the ductus cochlearis, and destruction of the spiral ganglion, fibrous and osseous changes in the semi-circular canals.

Connected with the fatal disease were : fresh purulent inflammation in the niches of the fenestræ, recent necrosis in the facial canal and the borders of the fenestra ovalis, the bilateral necrosis of the osseous capsule of the cochlea, inflammatory changes in the vestibular apparatus, extensive destruction of the acoustic and part of the facial nerves from inflammatory and hæmorrhagic lesions. The bilateral necrosis extending from the internal auditory meatus to the outer wall of the labyrinth, produced the secondary disease of the middle ear.

Moos thinks the meningitis was probably secondary. He found micrococci in the nerve-bundles in the internal meatus, etc., but no tubercle-bacilli. This laborious paper is accompanied by some beautiful microscopical drawings.

Dundas Grant.

Heineman, H. M. (New York).—*Abscess of the Brain following Otitis Media.* "Med. Rec.," April 23, 1892.

AN intemperate man, aged twenty-one, exposed to cold and privation, had recurrent otorrhœa since scarlet fever at eight years of age. A month before admission the ear began to discharge, and a week later the man had an epileptiform seizure. He continued delirious and violent. As there was only slight mastoid tenderness, normal temperature, and no indications for immediate operation, nothing was done beyond irrigation. He died suddenly two days after admission. There was found a large abscess between dura and pia mater, which had destroyed most of the cerebellum, but there was no evidence of caries of the temporal bone. The writer considers that "such a history of discharge from the ear, "either constant or intermittent, associated with the slightest cerebral "symptoms, even if not accompanied by an œdema of the mastoid region, "furnishes sufficient grounds for immediate operation." *Dundas Grant.*

Truckenbrod, C. (Hamburg).—*Cerebral Abscess after Otitis Media, healed by Operation.* "Arch. of Otol," April, 1892.

A MAN of fifty-four had a left median otitis of not long though somewhat doubtful duration. In about a month he became affected with violent temporal pain without vomiting, anæsthesia or visual disturbance. This was soon followed by slight paralysis of the right facial, aphasia, apathy, anarhythmia, dyslexia, and paresis of the right arm. His temperature was not higher than 100° or 101°; his eyes—fundi, pupils, etc.—normal. The diagnosis between cerebral abscess, meningitis and epidural suppuration was in favour of cerebral abscess. Professor Schede was called in and proceeded to operate at once. He first opened the mastoid, where no disease beyond former otitis was found. The tegmen, which was sound, was chiselled through, exposing the dura. This was divided and the

brain laid bare. The brain was tense and did not pulsate. An exploratory needle was inserted, and some bright fluid and pus drawn off. The opening was enlarged and a tube was inserted. Recovery soon took place.

Two other similar cases are briefly narrated in which, unfortunately, the same successful results did not follow. The writer does not place before us the points in the nature of the cases or in the treatment to which he attributed the difference of the results. In one there escaped a great deal of cerebro-spinal fluid with the pus, the bone was replaced, and there is no mention of the mode of drainage employed after the introduction of iodoform into the abscess cavity. In the other it is stated there is narrated an interference with breathing, and an extension of the disease in one lobe of the cerebellum across the middle line. Such a disturbance with the vital function of respiration would, we take it, point to sub-tentorial, cerebellar mischief, and would seriously affect the prognosis.

Dundas Grant.

Church, Archibald (Chicago). *The Vertigo of Arterio-Sclerosis.* "Med. Rec.," June 11, 1892.

THE vertigo is often attributed to dietetic errors and to various stomach disorders. It can be occasioned by suddenly rising from a recumbent position, and is often accompanied by staggering and temporary aphasia, but not, in the writer's experience, by actual loss of consciousness. It is important to recognize the cause of the symptom early, as the condition may eventuate in cerebral hæmorrhage. It has to be diagnosed from Ménière's disease and aural vertigo. The treatment which was found to give the best results was iodide of potassium in doses of from thirty to ninety grains daily. The relief afforded by amyl nitrite and nitro-glycerin was only temporary, and did not compensate for the disagreeable effects of these drugs.

Dundas Grant.

Miller, R. Shalders (London).—*Acquired Deaf-mutism.* "Lancet," June 4, 1892.

THE writer mentions two cases in which adults, supposed to be deaf-mutes, recovered a certain amount of hearing-power without treatment. He describes, also, the cases of two children in which the ordinary treatment for middle-ear inflammation effected an improvement, in one very great, in the other slight. He assumes that in these cases the deaf-mutism was acquired, but that in another case in which curative treatment was unavailing it was congenital. [The paper hardly proves the acquired as distinguished from the congenital nature of the affliction in these cases, but it proves the relative curability and encourages the practitioner in the thorough use of oto-therapeutical means before condemning patients to a life of deaf-mutism.]

Dundas Grant.

Toeplitz, Max (New York).—*A Case of Primary Labyrinth Necrosis with Facial Paralysis.* "Arch. of Otol.," April, 1892.

A CHILD of six and a half years had scarlatina with otitis in April, 1889. Nine weeks later she was found to have left facial paralysis, aural polypi, and caries of the promontory. Numerous polypi were removed, but

continually recurred. In June, 1891, a sequestrum was felt in the meatus. On July 9th half the cochlea was removed, and on August 6th the other half. The polypi then disappeared. The electric examination gave hope of recovery from the facial paralysis. The tympanic cavity was soon covered with a delicate cicatrix. Toeplitz considers it a case of primary disease of the labyrinth. The youth of the patient made hearing tests uncertain, but she stated that she heard both the high and the low tuning-fork through air-conduction as well as bone-conduction, and that the tuning-fork on the *right* mastoid process was heard *in the left ear* only.

Dundas Grant.

Uchermann, V. (Christiania).—*Anatomical Conditions found in a Case of Deaf-mutism from Scarlatina.* "Zeitschrift für Ohrenheilk.," April, 1892.

THE subject died of tuberculosis at the age of eighteen. When two and a half years old he had scarlatina, which was followed by deaf-mutism. Dissection of the right ear revealed a normal condition of the meatus, membrane, and ossicles. The stapes was fixed, the membrana rotunda ossified, and the labyrinth almost untraceable from fibrous and osseous inflammatory changes. In the left ear there was much pus, the membrane was perforated, the ossicles all mobile, the membrana rotunda ossified, the labyrinth and auditory nerve apparently normal. The brain was normal, with the exception of shrinking of the left upper temporal and Broca's convolutions. The disease seems to have primarily affected the left middle ear and the right labyrinth. In most instances scarlatinal otitis arises by extension from the naso-pharynx, and the labyrinth is only secondarily involved. There are, however, cases in which deafness comes on in scarlatina without any apparent affection of the middle ear—normal or only slightly dimmed membrane, mobility of the malleus and "positive" Rinne. There may be invasion of micro-organisms into the labyrinth through blood- or lymph-channels or through the aquæductus cochleæ from the sub-arachnoid space, or even by intervention of the lymphatics into the endo-lymphatic space through the subdural space and aqueduct of the vestibule. The tendency to infiltration of the Haversian canals and medullary spaces, and to the formation of new bone from periosteal hyperplasia, is well marked in otitis, following scarlatina, measles, and cerebro-spinal meningitis. All "mycotic" infections are probably capable in the same way of leading to labyrinthine inflammation and deafness. Uchermann has found it follow varicella, rubeola, pneumonia, pertussis, and possibly acute eczema. The wasting of the hearing centres in the cerebral cortex he attributes to the atrophy of inactivity. The complete destruction of the right labyrinth in correspondence to the wasting of the left centre supports Munk's views as to the crossing of the acoustic nerve fibres.

Dundas Grant.

Ferreri, Gherardo (Rome).—*Sull' uso della Fluoroglucina nella Decalcificazione del Labirinto.* ("On the use of Phoroglucin in the Decalcification of the Labyrinth.") *Innocenzo Artero*, Rome, 1892.

PHOROGLUCIN, a derivative of resorcin, was first recommended for decalcifying purposes by Haug, of Munich ("Centralblatt für Allgemeine

Pathologie und Pathologische Anatomie," No. 5, 1891). Ferreri decalcifies the petrous bone in the following way. The bone is freed from the adhering soft parts and is plunged for fifteen minutes in Mingazzini's fixing liquid—perchloride of mercury, two parts; absolute alcohol, one part; acetic acid, one part—and next washed in distilled water. It is then placed in the decalcifying fluid at the temperature of the room, the fluid being renewed every week. In thirty or forty days the decalcification is complete. The decalcifying liquid is thus made :—A gramme of phoroglucin is dissolved with the aid of heat in a hundred grammes of distilled water and ten grammes of hydrochloric acid. When the solution is complete the fluid is moved away from the flame, and when it is cold is mixed with two hundred grammes of alcohol at 70°. The petrous bone having been decalcified is washed in alcohol at 70° until there is no longer an acid reaction, when it is placed in absolute alcohol. In two or three days it is put into a solution of celloidin of the consistency of ordinary collodion. It may with advantage have been previously placed in a mixture of ether and alcohol in equal proportions. In order that the celloidin may penetrate thoroughly, it is well that the preparation should lie in a wide-mouthed bottle for from eight to fourteen days, or even longer. The preparation can then be kept indefinitely in alcohol at 70°, and may be cut at convenience.

Dundas Grant.

Allport, Frank (Minnesota).—*Some new Ear Instruments, with Remarks on the Treatment of Chronic Purulent Inflammation of the Middle Ear.* "Med. Rec.," May 28, 1892.

THE "Mastoid Retracting Speculum" is very little different from Barth's mastoid retractor, with which we have been familiar for a considerable time. Its use is, of course, for holding apart the lips of the wound during the operation of opening the mastoid antrum. The "Round-pointed Ear Hook" is a fine probe with a rounded point, bent at right angles for about three millimètres. With it he searches—as we all do—for carious spots or necrosed bone. He finds it useful in the removal of the malleus or incus. Another instrument he recommends is a "Smooth Ear Curette," a smooth wire loop on a delicate handle, and he employs it for aiding in the clearing of the meatus and middle ear from foreign substances.

Dundas Grant.

Dench, E. B. (New York).—*Two New Aural Instruments.* "Arch. of Otol.," April, 1892.

A SMALL wide-mouthed bottle containing a sponge (for saturation with a volatile fluid) has a stopper through which pass two tubes. One of these is connected with an inflating bulb and the other with a plug tip for the Eustachian catheter by means of flexible tubes. By turning the thumb-plate of the stopper the current of air may be directed either straight from one tube to the other, or through the bottle so as to pick up the medicated vapour. The other instrument is a Eustachian bougie. It consists of a silver Eustachian catheter, on the convex surface of which are several guides, through which passes the shaft of a bulbous bougie made of German silver. The proximal extremity is graduated, so that the length

of bougie in the Eustachian tube can be gauged. There are bougies with various sized bulbs, and for them may be substituted cotton-wool holders by which medicated applications may be made inside the lumen of the Eustachian tube.

Dundas Grant.

ASSOCIATION MEETINGS.

BRITISH MEDICAL ASSOCIATION.

Sixtieth Annual Meeting, Nottingham, 26th, 27th, 28th, and 29th July, 1892.

Section J.—LARYNGOLOGY.

President—R. A. HAYES, M.D., Dublin.

Vice-Presidents { DONALD STEWART, M.D., Nottingham.
T. MARK HOVELL, F.R.C.S.Ed., London.

Hon. Secretaries { JOHN MACINTYRE, M.B., Glasgow.
D. R. PATERSON, M.D., Cardiff.

THERE were two discussions, one demonstration, and fourteen papers; instruments were shown, and a large number of microscopic specimens and drawings exhibited. The following gentlemen, amongst others, took part in the work :—Messrs. Thomas Barr, Adolph Bronner, Lennox Browne, Mayo Collier, Richard Ellis, J. Dundas Grant, Prof. Gruber (Vienna), Wm. Hill, T. Mark Hovell, John M. Hunt, John Macintyre, H. A. Reeves, Wm. Robertson, Arthur Sandford, Prof. von Schrötter (Vienna), Scanes Spicer, Donald Stewart, Charles Warden, and Watson P. Williams.

Wednesday, July 27th.

The President thanked the members for the honour which had been conferred upon him, and said he looked upon his appointment as a recognition of the work done by his countrymen more than of any merit of his own. There was one point, however, to which he would like to call attention, viz., the present aspect of specialism in this department. With regard to the tendencies to local and particularly to surgical interference he was quite sure that a great deal of good work was being done, but it occurred to him that a word of warning from the presidential chair might be useful if not misunderstood, and he had a feeling that constitutional treatment might be overlooked were we not to guard against error. Further, it was possible that too severe local treatment might be injudicious in some cases, and was probably appealed to unnecessarily. He was quite sure the section would fully understand that he by no means wished to say anything against surgical procedure where it was necessary.

The Etiology, Pathology and Treatment of Nasal Neuroses, introduced by DONALD STEWART, M.D., and ADOLPH BRONNER, M.D.

Dr. STEWART said :—

First let me compare nasal neuroses to general neuroses. General neuroses are accepted on all hands. The neuroses treated by the

specialist are regarded frequently as the extreme views of men who devote their time to particular regions of the body. When the gynæcologist speaks of uterine or ovarian neuroses he is thought by the general physician to regard the malady from quite a different point of view to his. The physician speaks of *pelvic* neuroses and considers the symptoms arise from a perverted condition of the general nervous system ; whilst the gynæcologist seeks for the cause in organic change in the tissues of the uterine, or its appendages. Which is right ?

The same ideas hold ground in reference to visceral, thoracic, laryngeal, nasal and ophthalmic neuroses. The general physician looks with much doubt and suspicion on the views of the specialist ; and it is not too much to say that the symptoms described by rhinologists and attributed to nasal conditions are accepted by many as the dreams of men whose views are cramped by devotion to the study of special organs. In the following list of authors, which I append, one or two are introduced to show the extreme variance of opinion between the general physician and surgeon, and men who, like ourselves, give minute attention to special regions, *e.g.*, Dr. Goodhart, in his lectures on "Common neuroses" before the Harveian Society, attributes clergyman's sore throat, sneezing, catching cold, and tinnitus, more to a general neurotic condition than to organic local changes ; and he says that all one has to do in order to cure the clergyman's throat is to reassure the sufferer there is nothing wrong, and give him a good tonic !

Of course it is difficult, if not impossible, to separate the nervous conditions of any malady from the organic changes that may be visible in other tissues than nerves ; for in local inflammations, and even tumours, one cannot say there is absence of nerve disturbance. Indeed, a pure functional neurosis probably does not exist without an organic change somewhere as its cause. I take it that the maladies designated neuroses are generated in the same way, no matter in what region of the body the causes take effect ; and I apprehend also that a nerve symptom has as its cause a particular region or regions, in which exists an organic change. I shall best illustrate my meaning by proceeding to the etiology of nasal neuroses.

In the early years of life we may say there are scarcely any neuroses. There can be no doubt that certain constitutions inherit a delicacy of organization that is easily influenced by external causes ; but it may be said that in the children of the most refined, and the most highly strung, there is at birth a wonderful freedom from neuroses. Whence then come the causes of these distressing maladies ? They arise from our inability to understand the laws of health, or how to perfectly adapt ourselves to our environment. In the child, colds soon make their appearance, and one of the first regions to suffer in babyhood is the beginning of the respiratory tract—the nose. For years this region is the seat of catarrhs and *apparently* the general health does not suffer. Colds are not alone in their influence on this organ ; it is now well accepted that injuries in early life are potent factors in producing distortion and organic changes in the nose. By and by injurious influences are observed in the little sufferers—the child begins to suffer from nasal obstruction—he

snores at night, he is a mouth-breather, his chest develops badly, he frequently coughs, he talks "through his nose," and one night he awakes in "night terror"—in a word his nervous system is at last invaded.

Etiology.—My contention is that organic changes are absent in early life. Such changes are caused by external influences for the most part; and these influences take effect first of all at the periphery. True it is, that blood and zymotic diseases claim their share, but even these are conveyed, first of all, from without. In these ways are caused the diseases of the nasal passages. What are they? I will only mention the most important. I first and foremost place nasal obstruction; it is far and away the most serious condition we have to remedy, and yet it is only a symptom. We have also coryza, inflammations, hypertrophies, tumours, polypi, caries, necrosis, suppurations, atrophies, but not yet neuroses. In disease generally, nerve fibres can long withstand the ravages of organic change around them. Likewise nasal diseases are noted for their obstinate resistance to remedies; so far it is an axiom among the laity, and even among many in the profession, that nasal polypi are incurable. At length the sentient nerve twigs in the nose begin to convey the baneful impressions at the surface towards the more highly organized nerve centres, and soon neurotic symptoms are manifest in different regions of the body.

You have only to cast your eye over this long list of maladies described by men of distinction all over the world. Is it possible that all these symptoms are caused by nasal conditions? That they can be caused by nasal disease I have no doubt, but it is not for a moment implied that the causes are limited to changes in this region. I believe that all the symptoms can be generated by organic changes in other organs, however remote. How are these symptoms produced? I answer, through the nervous system by reflex action. Here let me pay a tribute of honour to the memory of the discoverer of reflex action, a native of Nottingham, Marshall Hall; his spirit may well rejoice over the great achievements that his mind initiated. The subject of reflex action is such a large one and so complex that I hesitate to refer to it. I adhere to the principles promulgated by Dr. Edward Woakes in his work on nasal polypus and ethmoiditis. It is there argued at length how a focus of organic change in a sensitive organ like the nose acts as permanent incitor to reflex irritations. Now one would expect that the neurotic symptoms originating in the nose would be first noticed near the seat of the original disease. This, though not necessarily a constant result, is frequently the case; and when we remember the close proximity of the brain and organs of special sense, it is an additional reason to attribute cephalic neuroses at least to nasal conditions. I do not overlook the fact that a local irritation may have its reflex manifestation at a distant part of the body; but on the other hand the reflex phenomena are more abundantly displayed near the seat of irritation. Coming to particular symptoms, I believe they can all be intelligently explained by reference to the action of nerves that physiologically differ. The trigeminus being the sentient nerve of the nose is frequently under a constant irritation; the impressions are conveyed to ganglia and reflected by motor nerves (spasms and paresis), vaso-dilator

nerves (congestions), vaso-constrictor nerves (atrophies), trophic nerves (wasting, paresis), or it may be a combination of all these in one case. The practically unlimited number of intricate combinations that may take place in the paths of reflex action makes it, in the present state of our knowledge, impossible to prove to demonstration that this or that symptom is due to this or that reflex path. From experimental research and from clinical observation, it is accepted as beyond doubt that it is in this direction we must seek for the causes of nasal neuroses.

The pathology of nasal neuroses is the pathology of the varied symptoms in the table I append. Can we in one pathology explain such different affections as aprosexia and asthma? That the two symptoms are allied there cannot be much doubt. Are they both due to a vaso-motor influence? Are hay fever and asthma generated in the same pathological manner? Are they both a vaso-motor hyperemia of the mucous membranes? I myself am inclined to accept this pathology before all other theories. As to the minute pathology of the nerve endings in mucous membrane, of the nerve conducting fibres, or of the cells of the central ganglia, I believe little certain is known. Why a certain organic change in the nose should in one person produce such disturbances and in another make no departure from health, is another condition difficult of explanation; we say it is due to metabolic, chemical, or mechanical changes in the nervous tissue. To me such an explanation carries little intelligence. I submit the ideas to the section for enlightenment.

TREATMENT. This includes the treatment of all departures from health in the nasal cavities. I shall only say a word or two to indicate my own views, and will leave it to my friend Dr. Bronner to enlarge on the subject.

The nares are to be restored to healthy conditions. The result to be sought above all others is to secure adequate nasal respiration.

(a) The first and most important step is to remove offending tissue, and before all means I think is excision by some method. The snare, the saw, the cutting forceps are each in turn found the most suitable according to the case.

(b) The next object is to restore the mucous membrane to a healthy condition, and it should be remembered that a degree of normal nasal respiration is a great aid towards securing our second point—streams of fresh air through the nostrils. Chromic acid and the actual cautery serve very good purposes. I do not know which to put first. The cautery does more work, but the effects of the acid are excellent.

(c) Washes. These are indispensable in many cases, but they should never be used beyond actual necessity. I hardly ever use any but an alkaline wash, combining it with a deodorant or antiseptic.

(d) What about general medical treatment? This is a means we can rarely do without. Why so, if the causes of the symptoms are local? Yes, the causes are local, but a long-continued local cause induces a general disturbance, far-reaching and deep (Dr. Solomon C. Smith), and "a neurosis remains after its cause is removed" (Clifford Allbutt). Time is thus an important factor in neuroses. Many a case withstands for years a constant drag on the system; at length an explosion takes place,

it may be in the shape of the "nerve storm" of asthma. The general system is invaded and must be treated. Time also is an important influence in treatment; the older the case the more inveterate is the hold on the general condition, and the less likely is the result of treatment brilliant. Are the results ever brilliant? Only those who are accustomed to nasal work can appreciate the expression of repose, the peaceful sleep, the general well-being and better development of those who have their nasal functions restored by surgical art.

Dr. BRONNER said:—The subject of nasal neurosis is a very old one. As far back as 1565 we find that Botallus records cases in which the scent of flowers brought on pain in the head and difficulty in breathing. Van Helmont, 1577, describes cases of hay fever. Bostock ["Transactions of Med. and Chir. Society," x. 1819] was himself subject to hay fever and asthma. No great importance, however, was attached to the subject until 1871, when Voltolini ["Anwendung der Galvanocaustik bei Erkrankungen der Nase," etc.] published several cases of asthma in which nasal polypi were found, and in which the removal of the polypi cured the asthma. Weber, Schaeffer, Hartmann, Fraenkel and others soon followed suit, and proved that the cases recorded by Voltolini were fairly common. In 1882 Hack published his famous book "Über die Radical-behandlung gewissen Formen im Migræne, Asthma, &c.," in which he attempts to prove that not only asthma but many other reflex symptoms can be caused by intra-nasal irritation. Hack's theory was that these reflex symptoms were due to irritation of the terminal fibres of the fifth nerve; which irritation was caused by the swelling of the cavernous tissue of the mucous membrane of the lower turbinated bones, especially the anterior part. His idea was to remove this cavernous tissue by the galvano-cautery, and then any irritation of the nerves would be impossible. Experience, however, soon proved that this theory could not be correct. Thus, in the first place, the destruction of the cavernous tissue did not always prevent a recurrence of the reflexes. Secondly, in many cases, any artificial irritation of these parts brought on the reflexes, without causing any swelling of the cavernous tissue. And Hack himself in 1885 ["Berliner Klin. Wochenschrift," 21 and 22] practically abandons this theory. In 1881 and 1882 B. Fraenkel, J. Mackenzie, Schaeffer and others strongly opposed Hack's theory. They are of opinion that the reflexes are caused by some irritation of the terminal fibres of the fifth nerve, due to pathological changes in the mucous membrane of the turbinated bones or septum. Boecker repudiates the reflex theory altogether, and states that the nasal changes are mostly incidental complications, or that they themselves form part of the symptoms of a central neurosis. Woakes ["Nasal Polypi"] says that the reflexes are (1) symptoms due to excitation of the sensory-motor nerve elements of the region implicated, and (2) those which involve vaso-motor nerves of the sympathetic system in relationship with the affected structures. As regards asthma, he says that it is due to irritation of, or pressure on, the nerve of Cotunnus, where it crosses the osseous portion of the septum. I myself am of opinion that we ought to divide nasal reflexes into two classes. Firstly, those in which there is some local irritation of the terminal fibres of the fifth nerve due

to polypus ; pressure of the turbinated bone on the septum ; adhesions of the turbinated bones to one another, or to the septum ; local hypertrophy or atrophy of the mucous membrane ; formation of crusts ; foreign body, etc. Secondly, those cases in which the nasal changes are not primary, but are themselves the outcome of some central neurosis, just as we have similar changes in the mucous membrane of the stomach, intestines, bronchi, etc. In this latter class of cases, local treatment of the nose, such as the application of the galvano-cautery, stops the reflexes, not because it removes the irritation, but because it acts as a powerful counter-irritation. MacBride ["Brit. Med. Journ.," Jan. 22nd, 1887] advocates this theory.

As regards treatment, this should be both local and general. In the former class of cases the local treatment is naturally the more important. Any polypus should be removed with the cold or hot snare—not with the forceps ; any hypertrophy of the mucous membrane treated with the galvano-cautery, chromic acid, or trichloracetic acid—I myself prefer the cautery. If we apply two or three cocaine plugs for ten minutes each, the operation is practically painless. If we introduce an antiseptic plug after the operation (I use creoline and iodol) there is no danger of infection. Any deviation or spur of the septum can be operated on by the knife, saw, or trephine—I use a trephine with cutting edge ["Lancet," July 24th, 1890]. In the treatment of atrophic rhinitis I use trichloracetic acid and alkaline douches.

General treatment is of more importance in the second class of cases. I prefer change of air, often combined with cold water treatment, to "tonics," which, in my experience, are of very little use. A long sea voyage, a lengthened stay in Switzerland, Ems, or Mont Dore seem to be the most beneficial—very much more so than a trip to Egypt, which, although fashionable, is not always of much use. Regular bodily exercise, especially rowing and riding, is often of very great benefit.

Remarks were made by Drs. ROBERTSON, BARR, DUNDAS GRANT, SEMON, Mr. LENNOX BROWNE, and others.

Dr. STEWART, in view of important papers to follow, and especially Professor Schrötter's, briefly thanked the section for the favourable views expressed on his paper. The list of authors submitted by him, though a long one, did not by any means exhaust the number who traced various neurotic symptoms to nasal conditions.

Professor Von SCHRÖTTER read a short but interesting paper on the *Nervous Diseases of the Throat*, for the most part consisting of illustrative cases, with remarks thereon. This paper will be published later.

In the discussion which followed, Dr. FELIX SEMON, of London, drew attention to the explanation which Professor Schrötter gave of paralysis of the lateral arytenoideus muscle from pressure on the recurrent nerve, and spoke of the difficulty experienced in finding paralysis of one adductor of organic origin.

Professor Von SCHRÖTTER, in reply, vouched for the accuracy of the observations which he had made on the patients, and said that, while he

was quite willing to give attention to the objection raised, he could only say that we cannot explain everything in this world.

It is needless to add that both Profs. Schrötter and Gruber received a hearty welcome in the laryngological section, and the honour of their presence was fully acknowledged by the section in a complimentary motion made by Dr. BARR, of Glasgow, and unanimously approved of by the members.

Dr. WILLIAM HILL read a paper on *Rhinalgia*, with reports of interesting cases of the same.

Thursday, July 28th.

The proceedings began with a demonstration by Dr. JOHN MACINTYRE, of Glasgow, on the *Etiology, Pathology, and Treatment of Catarrh of the Nose and Throat*. The author began by pointing out the difficulty of classification of diseases, and drew attention to the different designations of catarrh in the upper respiratory tract. He first pointed out that catarrh was for the most part really a manifestation of some other condition or conditions which had produced a deviation from the normal function. He next drew a series of pictures, illustrating cases which might fairly be called catarrh in the nose and throat, in the acute, sub-acute, and chronic conditions. Proceeding, he said :—

That all our ideas may be modified by a study of etiology most will admit, and this branch of our work is now being carefully and enthusiastically investigated. In the ordinary text-books on affections of the upper respiratory tract a considerable prominence is given, and very properly so, to the consideration of certain factors which have an influence upon the production of catarrh ; hence we have such conditions referred to as impure air, water, food, atmospheric conditions, climatic variations, and clothing. The taking of cold, often erroneously attributed to draughts of cold, also the various diatheses, such as the neurotic, rheumatic, syphilitic, and strumous, amongst others, are, by a universal consensus of opinion, placed amongst the important factors in the production of catarrh ; in the same way we find due reference to the inhalation or imbibition of detrimental materials. All these are quoted as modifying the susceptibility of the individual to the attack or the perpetuation of it within him. There is no reason why any of these factors should be excluded from consideration in such a paper as this. It may be more useful, however, in the limited time at our disposal to suggest other points for consideration, bearing more particularly on branches of work which are engaging the attention of every student of etiology in this and other departments of medicine and surgery. To make this clearer, let us refer to certain conditions which are intimately associated with the production of catarrh in the mucous membrane. A child places a foreign body in either nostril, and the irritation produced leads to a series of symptoms indicating a catarrh in the passage. Again, cultivations of an irritating organic substance, such as some of the pathogenic microbes seen under the microscopes, nay, even the chemical extract without the living organism, will produce evidence of inflammation in its vicinity when applied under favourable circumstances to the same tissue. An inoculation of certain

poisons in the pharynx, such as diphtheria, will not only give evidence of a local necrosis of tissue at the seat of inoculation, but also of a catarrhal inflammation in its vicinity. An extract of the products of tubercle bacilli injected into the subcutaneous tissues at a considerable distance will produce indication of a catarrh in the throat. Lastly, an affection, such as measles, produced by the inoculation of blood from another patient suffering from this affection, and introduced at a different part of the system, will produce evidence of catarrh in the same mucous membrane. Now, in the case of the foreign body, and also the second and third example given, the cause of the catarrh is applied to the external surface of the mucous membrane, whereas in the case of tuberculi or measles the irritation must reach it from the deeper or internal structures of the same tissue. Hence we are driven to the conclusion that certain agents applied from without, and other agents brought from within, may result in the production of phenomena which, when grouped together, are named catarrh.

In a given healthy case, under ordinary conditions, the removal of the cause results in resolution, and with this disappears the evidence of catarrh. For example, if the foreign body be removed from the nostril, or the microbes effectually destroyed by antiseptic precautions, the catarrh from external sources ceases, and so by the natural secretions and excretions tuberculin and the poison of measles, under favourable circumstances, will gradually be eliminated, and in healthy individuals resolution take place. It as naturally follows, however, that if the cause be tardily removed, certain changes are bound to take place as the result of the foreign substance, which may perpetuate and increase the conditions referred to. Four things in the above must be taken into consideration. Firstly, what causes may act in the production of catarrh; secondly, the structure and function of the membrane; thirdly, the pathological changes; fourthly, the methods of resolution or perpetuation of the affections.

In the external causes, undoubtedly a place must be given to temperature, but in saying this I am not committing myself to any peculiar theory to explain the popular term of "taking cold." Certainly the air exercises an influence according to pressure and moisture, but there can be little doubt many particles are carried in with the air (and this remark will apply to food), which are of an irritating nature. Inorganic materials may exert an influence, but undoubtedly the most marked are those of organic origin. On the table I have placed a number of microscopic specimens and drawings to illustrate the paper, and they are arranged in the following order:—(1) Bodies which are apparently harmless in the upper respiratory tract, but while considered parasitic or saprophytic, may, under certain conditions, owing to absorption of the chemical products which they produce, become pathogenic. (2) All the pathogenic forms which are of interest to us, from the higher fungi, *e.g.*, thrush, to the less developed, as in tubercle, pneumonia, diphtheria, suppurative processes, *crisipelas*, etc. Many of these are of extreme interest—probably none more so than the saprophytic.

Elsewhere I have given full descriptions of the experiments which have been performed with a view to determining what micro-organisms

are found in these cavities. Briefly, let me say that a large number of patients were examined, microscopic specimens prepared and stained after the approved methods, while cultivations were made from the contents of the secretions. Any investigator soon finds the examination of the upper respiratory tract very fertile, and it may be anticipated that, in a comparatively short time, nearly every known micro-organism will have been found in the mouth, a fact easily understood when we consider the multitude of organisms taken in with the food and air. We are forced, however, to fall back upon other methods of investigation in bacteriological research, that is, to discover what organisms are present in a particular affection; secondly, by repeated observations, to notice if the same organisms are to be found in different individuals suffering from this; thirdly, to cultivate and isolate; fourthly, to inject the different pure cultivations into the tissues of animals, in order that a similar disease may be reproduced; fifthly, to try to discover the same organisms in the animal so affected; and lastly, to cultivate them again outside of the tissues of that animal, and to compare them with those found in the tissues of the person first affected. In another paper I have demonstrated the association between the germs of the suppurative processes and erysipelas and abscess in the nose, naso-pharynx and larynx, some of which might have been considered idiopathic but for the light recently thrown upon such conditions. Further, I was able to show an association between the micro-organisms of erysipelas and recurring mischief in the antrum of Highmore, erysipelas of the upper respiratory tract, and even post-pharyngeal abscess. Microscopic specimens of the organisms found in these cases will be seen under the microscopes, and drawings of the same are also exhibited. It is extremely interesting to note this association, because in many cases of slight catarrh we are probably dealing with specific organisms, although the signs are not sufficiently pronounced to enable us to diagnose them. An example of this will be found in diphtheria, where, in slight cases, it is utterly impossible, from the catarrh present, to diagnose any particular affection, and yet the person so affected may transmit it in a more serious form to others. Viewed in this sense, therefore, it may be useful to note that catarrh may result from many causes, and so tubercle, pneumonia, diphtheria, syphilis, the suppurative processes, erysipelas, and many of the higher parasitic fungi all have their attending catarrh, and it is not at all improbable that further examination of the parasitic or saprophytic organisms will show that they also are, under certain conditions, capable of producing catarrh. It has long been known that human saliva, under certain conditions, may produce serious results when introduced into the tissue of another, say in the case of a bite, and nothing apparently wrong with the individual who inflicted the injury. There can be little doubt that the so-called condition of insanitary sore throat will, sooner or later, be referred to the action of specific organisms, some of them probably already known, but not traced in their casual connection, and others yet to be discovered.

For a long time it was granted that foreign material, even inorganic, entering the tissues could set up inflammation, and of a sufficient degree to become purulent. This idea has been questioned, but I think the

bulk of evidence is in favour of the view that the earlier opinion was the correct one. Indeed, inflammatory results may be caused by injecting the products of the organisms. It is evident, if we admit that such sterilized chemical substances can set up suppuration without the organisms, we have admitted the fact that some inorganic substances can do so, but microbic invasion differs from the inorganic in the sense that it not only produces irritation where the poison is applied, but it may be reproduced in different foci. These poisons may be derived from the surface, but they may also, as we have seen, be brought from within. A point now comes of intense importance, viz. :—Local inoculation of the products of those organisms causes irritation or death at the part ; but there is also a considerable amount of inflammation set up in the vicinity, and so in diphtheria we have necrosis at the point of inoculation, but we have also an intense inflammation surrounding it. In a case of actino-mycosis, once the parasite has been introduced into the animal tissue, an inflammation is set up in the vicinity ; and to take a simpler example, when the foreign body is placed in the nostril, irritation is also very soon set up.

This catarrh or irritation may be looked upon in two senses. First, it may be considered a direct result of a destructive agent applied to the tissues ; but again the inflammation in the vicinity and consequent upon the application of the irritable substances has also to be considered a process of repair. For example, if we apply the point of a galvano-cautery to the tissues within the nostril, a local necrosis takes place, and shortly afterwards the line of demarcation between the dead and living tissue gives evidence that a process is taking place, by means of which the dead part will ultimately be cast out ; and when the necrosed part has been thrown out, it will be observed that the red zone which surrounded it was but the superficial indication of a somewhat concave surface covered with minute granulations, indicating the deeper limit between the dead and living tissues. Thus the inflammation was but a method of getting rid of a difficulty. The action of chromic acid on the tissues is much the same, but it differs essentially from the cautery in one respect, namely, being soluble, its application is less defined, and it is more difficult to trace the processes, owing to diffusion. The same remark holds good about the inoculation of the products of micro-organisms, where by the solubility of the products it is very difficult to trace the exact point of application. The local action depends largely upon the solubility of an agent. Microbic influences are the worst of all, in the sense that the living organisms carry with them the power of reproducing themselves, whereas inorganic substances only produce the effect at the place, or according to the quantity administered, and its solubility. In all these cases, however, it is fair to assume that the action is much the same. While there is destruction of tissue where the poisons are applied, yet by their very presence a catarrh is set up in the vicinity, and more particularly in the parts where the irritation is less active ; by this means what is objectionable is cast out, and afterwards the process may be regarded as a means of repair.

The older surgeons treated the grosser lesions rationally enough, and the cause was removed, which was speedily followed by the resolution of

the surrounding inflammation. Catarrhs, however, which were due to less defined causes, such as microbic influences, of which they could know nothing, led to less attention being paid to their removal, and so the treatment was too often directed *against the inflammation itself*. If our reasoning be correct, catarrh is to a great extent a method of Nature for getting rid of a difficulty, and our whole efforts ought rather to be the removal of the cause of which catarrh is but an evidence.

Anyone can see the importance of this distinction by way of treatment. What is the object of using stimulants, irritants, or so-called astringents in the form of sprays, gargles, or pigments, if inflammation is largely to be considered in itself non-detrimental? It is but a manifestation of something else producing it, and all treatment intended to combat it or to hamper it, instead of aiding, is not unlikely to add to the difficulties of Nature in removing the causes. Where we can remove a cause, by all means let it be done: where it cannot be done, our aim should be to aid Nature in her attempts to do it.

It may be said by some here that inflammation ought rather to be encouraged, and, in a sense, but a strictly limited sense, this is true. Our argument is not this, but rather that it ought to be prevented if possible. Such a view could only be suggested where the cause could not be removed, but if this be so, surely it would be wise to follow up Nature's way of acting. Certainly her attempts at cure may require our help and control—for example, by its violence œdema may set in and threaten the patient's life; again, by repetition of the cause and attempts at cure, a constant and prolonged struggle may result, and thus quite new conditions set in, which in themselves may secondarily be the cause of new and more serious affections. This is, in fact, what we are constantly witnessing in the nasal cavities, where, by repeated attacks and attempts at cure, hypertrophy results, say in the covering of the turbinated bones, which is in itself the cause of changes in vision, hearing, and voice, if not of a still more serious nature.

Reference to the etiology would be incomplete without mention of the diatheses, which form an important factor, and therefore must be an important consideration in treatment, and these were carefully considered. The physiology of the region in question, and the pathology were gone into as far as it was thought necessary, and in conclusion the author pointed out the changes which catarrh ultimately produced in the soft and hard structures of the nostril. Small beginnings lead to changes, slowly and insidiously, which perpetuate the original conditions, although somewhat masked by the slowness, and these in turn give rise to ailments of vision, hearing, and voice, through changes in the soft and hard structures. What we have to deal with is not so often the catarrh in the first stage, but the supervention of acute upon chronic conditions, and these themselves. When we come to consider the treatment it must be evident that the aim of every surgeon should be the complete restoration to function, and further, the nearer we are able to imitate the natural process by which Nature tries to get rid of the cause the more successful we are likely to be. We should, therefore, prevent the entrance of matters which produce catarrh; secondly, once they have been produced,

try to remove them, or arrest their development ; and thirdly, if this be impossible, we must encourage Nature's means for casting them out. Reference was further made to the ordinary methods of treatment, particularly of the time-honoured inhalations, sprays, gargles, and insufflations, and it was held that the time had now come when a demand must be made for a reason being given in the application of all such agents. Any scientific treatment must rest upon a surer basis than empiricism. Practitioners who are usually entrusted with the earlier stages of these cases should be warned of the consequences which may ultimately ensue if due attention be not paid to all the conditions which ensure a complete recovery from acute inflammations and the exanthemata ; and lastly, it should be our aim to encourage Nature by judicious rest, sanitary arrangements, proper dietary, and, in fact, everything which conduces to the constitutional well-being of the patient. The demonstration consisted of over a hundred microscopic specimens, cultivations, and coloured drawings.

Dr. Macintyre was thanked for the trouble taken in bringing the subject before the members in such a complete and extensive way. Mr. Lennox Browne expressed the great satisfaction which all present must feel in such an interesting and all-important subject.

The following abstracts are from papers read at the section. The four papers were taken and discussed together :—

Dr. SANDFORD read a paper on the *Importance of a Systematic Course of Physical Voice-Training at School and College, with regard to its Influence on prevalent Throat Troubles in Public Speakers and others.*

He said :—My object will be attained if the interest of the medical profession generally be awakened in the subject of systematic voice-training, with a view to secure the establishment of this important branch of education on a proper scientific basis, and within the reach of all, so that it should no longer be left to the unsupported efforts of a very few scientific teachers, and a comparatively large number of quacks or charlatans, whose only claim to pose as exponents of its principles is the possession of sufficient intelligence to impose on the credulity of their victims.

At the present time I advocate the consideration of the subject upon general principles only, quite independently of any particular system of teaching, trusting that the medical profession may, by their recognition of the importance of the subject, give the weight of their influence in demanding for it that attention which it deserves at the hands of the governing bodies of educational establishments and elsewhere.

The public at large do not recognize that articulate speech is—now-a-days at least—an absolutely artificial acquirement, and not a gift from the gods, spoken language being produced by a very subtle and complex mechanical contrivance, worked by the agency of numerous nerves and muscles. For perfect articulation, absolute co-ordination of these is required, and for each change of tone or pitch a readjustment of the whole apparatus is necessary.

Everyone is familiar with the difficulty exhibited by a child in acquiring the first rudiments of intelligible speech (as distinct from mere *phonation*, which is perhaps one of the first accomplishments manifested by the newly born), and it is only by constant imitation and practice that even the simplest words are pronounced correctly—that is to say, that the child can obtain a mastery over the musical instrument born with him, whereby its delicate mechanisms can be worked in harmony, and various recognized combinations of sound utilized as a vehicle of thought.

In a similar manner the kindred art of writing is acquired by imitation of certain recognized symbols, at first painfully and ineffectually; and only by constant practice can facility be insured in the muscular co-ordinations necessary for the transference of thought into written language. In both cases it is extremely important that the first steps in the necessary physical exercises should be conducted on proper scientific principles, and after approved models.

Now, in primary schools, much attention is devoted to the cultivation of hand-writing; very little to that of mouth speaking. The child is instructed in correct posture and the proper position of his arms, and his fingers are guided in the formation of the first rudimentary written characters. No attention, however, is given to training the proper muscles of respiration; no guidance in the proper adjustment and management of his mouth and throat, necessary to form correctly the various intelligible words he gradually learns to utter. He imitates in a slovenly manner the nearest models, be they good or bad. Later on at the public school, if he abstains from false quantities and bad words (the former particularly), his vocal organs receive small attention.

Subsequently, at college, where the youth is presumably supplied with all the necessary weapons to fit him for the battle of life, no attempt is made to train the vocal powers of the student preparing for a career as a public speaker. Every effort is directed towards filling him to the lips with useful information, but there it stops. The cultivation of his intellectual faculties is pushed and stimulated in every way, but little is done systematically to give him that physical training of his vocal organs whereby he can employ his acquirements to the best advantage. He resembles the soldier supplied with excellent arms and ammunition but untaught in their skilful use, and deficient in that muscular strength and endurance which can be produced only by systematic physical training and drill.

Lastly, when he finally emerges into public life—be his sphere of action the pulpit, the platform, or the stage—impediments to success, often insuperable, are unexpectedly discovered in the utterly untrained condition of his vocal organs. Many a man brimful of ripe ideas and intellectual activity has found himself at least severely handicapped through the failure of his voice.

This failure is, I believe, in many cases purely physical, resulting from an unwonted strain thrown suddenly upon untrained muscles, and could, I am convinced, in the majority of instances, have been obviated by a preliminary course of physical voice-training.

The extent to which physical training is necessary for the exercise of

such arts as fencing, boxing, or any similar accomplishment demanding both skill and endurance, is as nothing compared with its necessity in preparing the delicate muscular system of the vocal organs to meet the prolonged strain thrown upon them in public speaking. The advantage that must result from a course of skilful teaching is equally striking in both cases. More especially is this true in the case of clergymen, whose duties are often discharged in an unnatural voice, which, whatever be its object, cramps the full freedom of laryngeal muscular action.

In the exercise of the coarser physical accomplishments, to which I have referred, violent exertion without previous training has often produced disastrous effects, resulting in muscles permanently enfeebled, and severe functional derangement of various organs. The equivalents of these conditions found in the larynx are toneless, exhausted muscles, painful in use and ineffectual in action, flaccid, congested cords, and general hyperæmia of the mucous membrane and neighbouring structures, with ensuing enlargement of the glandular elements, resulting in a still further hampering of the already over-wrought muscular system.

In this enfeebled condition the throat is defenceless in the presence of any tendency to organic disease, and is a ready prey to any hostile germs or atmospheric influences to which it may be exposed. The voice itself becomes weak and husky, devoid of tone, and incapable of sustained effort, any attempt at the latter being painful and distressing.

Suppose the case to be that of a young clergyman, launched straight from the lecture room into the discharge of duties entailing, it may be, continuous speaking for several consecutive hours in a large church. Totally ignorant of the possibilities afforded by skilful management of his voice, and feeling perhaps that he is not making himself audible to his audience, he attempts to replace by violence that skill which alone can readily and effectually accomplish his object, but of which he has no knowledge. He calls to the aid of his exhausted throat every muscle of his body which can directly or indirectly assist in the discharge of his allotted task; and by extreme physical exertion, by raising his voice to the highest possible pitch, and, it may be, by the assumption of an artificial tone, he struggles through a performance disagreeable to his audience and disastrous to his own voice, finding himself at night prostrated with fatigue from head to foot. This is repeated at frequent intervals, until eventually his throat breaks down, and he seeks advice.

Similar illustrations might be taken from the history of the platform or the stage, although in the case of the latter avocation the individual is more dependent upon personal efforts to obtain a hearing from his audience, and therefore perhaps takes more pains in cultivating his vocal powers.

When we consider how very frequently cases such as these come under our notice, a vision of the vast extent of private misery and of public inconvenience, springing from the want of systematic voice training, rises before us, and prompts us to earnestly seek some remedy for this prevailing evil.

In dealing with the connection between throat troubles in public speakers and a want of proper voice training, we must first estimate the

influence exercised by pre-existing abnormal conditions, either organic or otherwise.

Every day fresh light is being thrown upon the effect produced by abnormalities of all portions of the respiratory tract upon the quality, resonance, and power of the voice. All affections interfering with the patency of these passages, either in the form of new growths or hypertrophy of existing structures, must seriously impede vocalization. It is therefore essential that any such conditions be first removed, else all attempts at proper training in vocalization must be futile. For this purpose the early detection and treatment of such conditions in *children* is most important, before they have acquired the habit of using faulty combinations of the vocal elements in the effort to overcome mechanical obstructions to the correct formation of words. Hence the earliest symptoms of nasal or post-nasal obstructions—as evidenced by a tendency to mouth-breathing, snoring, or an imperfect pronunciation of certain words—should be subjected to active treatment by the physician before imperfect respiratory action has had time to impede natural chest-development and impair the healthy condition of the air-passages in the growing child. The nasal passages should be carefully overhauled for symptoms of stenosis, enlarged turbinals, polypi, etc. ; the naso-pharynx for adenoid growths, enlarged tonsils, or other troubles ; and when these have been relieved the province of the surgeon ceases, and the patient should be handed over to the skilled voice-trainer for instruction in scientific physical drill of the vocal organs.

Upon the subject of voice-training much has been said and much has been written, but no systematic attempt has been made to induce educational governing bodies to practically recognize its importance. Many valuable works have been published upon the subject from time to time—some by distinguished men who have passed away, some by living specialists of world-wide reputation—notably, an exhaustive work on “Voice, Song, and Speech” by one of the latter—but all these contributions to literature, so interesting and instructive in themselves, seem only to have reached the few, and a more general movement is necessary in order to bring the practical importance of the subject before the public at large.

It would be out of place here to enter into any discussion of the merits of the various methods or systems of instruction advocated from different quarters, the object of each being to secure the greatest amount of satisfactory work with the smallest amount of resulting fatigue. Various theories have been propounded, and each in turn finds eloquent supporters. Take, for instance, the relative claims of the methods of breathing in singing and speaking, known as the *clavicular*, the *costal*, and the *diaphragmatic*. Each in turn has received exclusive support, much scorn being heaped upon the advocates of the other methods. I cannot but think that this somewhat resembles a controversy as to which foot is the most useful in walking ; each in turn seeming best to meet the requirements of the situation. In reference to breathing capacity, I have no doubt that the proper course is to cultivate the power of using *all* respiratory methods, and that they will all assist, more or less, in sup-

porting sustained vocal effort, according to the nature of the latter, so that none need be adopted to the utter exclusion of the others.

All I would now put forward is that some such system of instruction should form the invariable foundation for any subsequent acquirement of elocutionary accomplishments. Habits of pronunciation on a wrong principle are easily formed, and the victim requires careful instruction and skilful handling to eradicate them. It must be remembered that the pronunciation of a single word is only the result of a muscular impulse passing down an intricate track, with numerous junctions and sidings, and ultimately effecting that proper arrangement of the mouth and other parts which modifies the sound emitted by the vocal cords into intelligible speech. Any slight impediment or irregularity is sufficient to check the impulse, or throw it on to "wrong points," so to speak, and a good deal of hesitation, jerking, and fumbling ensues before the right points are struck. This produces a habitual ataxia, and is, I believe, a common cause of that most serious obstacle to vocalization, viz., *stammering*, which sometimes defies the voice-trainer's art, though I have frequently met with most brilliant results from treatment—first, by the surgeon, and subsequently by the voice-trainer. I have, moreover, seen more than one case in which the stammering was fairly overcome, but returned temporarily with every throat trouble or catarrhal affection, apparently from interference with the usual track of impulses by thickened, altered tissues.

Of course there are many stammerers whose cases offer no such explanation of this difficulty in speech, and these can only be classed as of "neurotic" origin, either *primary*, where the inco-ordination is due to some central deficiency often associated with intellectual weakness ; or *secondary*, where the neurosis ensues upon some disease, *e.g.*, whooping cough, upon some reflex interference, or upon mere aggravated "nervousness." In these cases the skilful voice-trainer has worked wonders.

Thus cause and effect are intimately mixed up ; for while we see so many throat troubles directly springing from improper use of the vocal organs, on the other hand pre-existing morbid conditions are a fruitful source of vocal impediment. Organic diseases and functional disorders all require equally careful and intelligent treatment ; for if among the former class are many cases perhaps fatal to life, among the latter much larger division we find numberless conditions which, if not directly threatening to life itself, at least deprive the sufferer of the means of living.

As regards the origin of all this trouble, I believe that it results first from neglect in failing to observe and have treated affections of the respiratory passages in infancy and early childhood, particularly of the nose and naso-pharynx ; secondly, from neglect in not getting the child taught how to speak, and how to breathe while speaking, on proper principles ; thirdly, from continued neglect during boyhood as regards the cultivation of the voice ; and, finally, from fatal neglect of the interests of the individual and of the public at large, in allowing clergymen and other public speakers to emerge from their universities utterly ignorant of the most rudimentary principles of scientific voice production, although

otherwise perhaps equipped in every respect in the fullest manner possible, and with every faculty and every organ cultivated to the highest pitch, except those appertaining to speech—to him perhaps the most important of all.

As to the remedy for all this, I believe it lies, first, in early attention to the health of the respiratory passages—from the nose to the diaphragm—at all times of life, but more especially in early childhood; secondly, in promoting at least an elementary acquaintance with the physiology of the vocal organs, and some knowledge of the principles of scientific voice-training among the child's first teachers; subsequently at school, that at least some attention be given to the subject; finally, at the university, that in the divinity and other schools a recognized course of physical voice-training form part of the ordinary curriculum; that no license to preach be given to any clergyman until he has attended such a course of instruction; and that, in order to render the foregoing measures effective, countenance and encouragement be given to scientific men to perfect themselves as instructors in this subject.

The medical man, even the throat specialist, has nothing to do with this. The physician is not a drill-sergeant, and although he may advocate the advantages of physical drill, vocal and otherwise, of carriage exercise or of sea-bathing, it does not follow that he should arrogate to himself the duties of the presiding genius at these several functions.

It is sufficient that the medical profession should, in its conscientious vigilance for the public weal, direct attention on scientific grounds to the necessity for systematic reform of abuses, the far-reaching ill effects of which it has so many opportunities of observing.

It is the part of those who would most directly benefit by such reform—viz., that section of the public who “do” the public speaking—as well as the public themselves, to take the matter up and not rest until this subject receives the attention it deserves, and scientific physical voice-training be established on a proper basis.

MR. LENNOX BROWNE.—*Faults in Voice Production which lead to Throat Disease.*

The author commenced by expressing his conviction that the number of diseases which, independently of fault in production, hamper the voice user, are out of all proportion in a minority to those due to either wrong method or over-exertion. He considered this subject in relation to three distinct elements involved in the act of voice production.

First, the motor in the lung representing respiration. Secondly, the vibrating, situated in the larynx. Thirdly, the resonating, represented by the chest walls, wind-pipe, the supra-glottic, pharyngeal, and naso-pharyngeal cavities, with the antral and even frontal sinuses. The best way of inflating the lungs was shown to be by the combined action of the diaphragm and the intercostal muscles, and the avoidance of use of those muscles which were used in what is known as “collar-bone” breathing; a method of breathing never practised except in cases of disease in which there is a dire struggle for breath to support life. Beyond this best method of filling the lungs, it was extremely important to economize

the exit of breath once inhaled, as first, to prevent the act of breathing being too frequent. Secondly, to be able to "attack" the tone cleanly and promptly without previous escape of breath, and with just so much vibration as to permit the adjustment of the cords for the particular note pitched. Fault in this region led to spasmodic, jerky respiration, and a want of co-ordination in the vocal cords. It was also a fruitful cause of chronic pharyngitis, a point alluded to in another paper by the same author.

In the vibrating element, beyond this spasm and the vice known as tremolo or vibrato, due to improper breathing, there were defects in what is known as the joining of the registers; the lower register being carried up too high instead of the higher being brought down to meet it. This fault leads to the formation of what is called "a hole in the voice," the bridging over of which is one of the main aims of every good teacher.

Another fatal defect leading to much throat congestion, as well as very unsatisfactory vocal results, was raising the pitch of the voice, instead of raising the voice itself. An instance was made, that as a man naturally speaks in that part of his voice in which he can produce the best result with the smallest amount of effort, that is precisely and obviously the part which should be cultivated for public speaking. This was illustrated by a very interesting and well-authenticated anecdote of the great French actor, Talma. He made it a practice to engage in some ordinary conversation with anybody he happened to come into contact with in the wings until the time arrived for him to appear on the stage, when he was careful to continue to speak at the same pitch at which he had just been chatting familiarly behind the scenes.

Mr. Lennox Browne wished that this lesson might be taken to heart by our clergy, to many members of which profession he had often pointed out the absurdity, and injury to the throat, of giving an affected air of solemnity the moment they commence to speak in public on solemn matters. All these faults were followed by disease, which might or might not require surgical treatment, but for which elocutionary education should be adopted either as a substitute or afterwards.

The defects in resonance to be considered were chiefly those which affected the tuning of the resonating cavity to the peculiar note pitched.

One of these was a want of contractile power in the soft palate which led to nasal tone, due to escape of air through the nostrils. Another defect was a want of suppleness in the tongue, causing imperfect adaptation of that organ to the changes in its position and form, to various vocal and consonantal sounds. These could both be cured by gymnastic exercises based on knowledge of the action of the muscles involved.

In conclusion, Mr. Lennox Browne made a powerful appeal for a more general recognition of the necessity for scientific training of the voice, as the best means of retaining its health, and quoted the saying of Madam Seiler, "that if the physiology of the voice were better known and acted upon, there would be but few complaining singers and speakers." And, lastly, a quotation from Herbert Spencer, "Not only the poet, but also the artist of every type is born, not made. What we assert is that innate faculty will not suffice but must have the aid of organized

knowledge. Instruction will do much, but it will not do all. Only when genius is married to science can the highest results be obtained."

Dr. MIDDLEMASS HUNT.—*On Loss of the Singing Voice.*

The scope of this paper was limited to loss of singing voice, due to what is usually termed "fatigue" or strain of the vocal cords, but is really caused by some paresis of the laryngeal muscles. It is most frequently met with in amateur vocalists, and especially in ladies. The larynx is free from inflammatory changes, but there is evident paresis of one or more of the vocal muscles. The loss of voice is rarely complete, but is limited to one register, or to a few tones of a register. In all voices, both in speaking and singing, we can recognize a lower, an upper, and a medium range of tones. As the result of clinical experience, we find that a loss of notes in the lower register is associated with paresis of the arytenoid muscle, loss of the medium register with a thyro-arytenoid paresis, and loss of the upper register with crico-thyroid paresis.

Hence the name "leit muskel," or controlling muscles, has been suggested by Michael, of Hamburg, as describing the relation of these muscles to the three vocal registers.

The causes of such vocal failure are :—

- (1) Wrong methods of breathing ;
- (2) Wrong use of the vocal registers ;
- (3) Simple over-use of the voice ;
- (4) Use of the voice while suffering from catarrh.

Treatment consists in rest to the voice, and a new and competent singing master. Results are, however, frequently unsatisfactory, and often the lost voice is never restored.

Mr. ELLIS (Newcastle-on-Tyne) read a note on *A Frequent Cause of Throat Irritation and Congestion in School Teachers*, showing how the misuse of the blackboard led to these effects in a very large number of cases. He showed that when the teacher was instructing a large class, and so exercising his vocal and respiratory organs in a high degree, the dust thrown off from the blackboard was highly injurious and irritating. Frequently common chalk was used, and a dry duster to efface the figures or diagrams. He pointed out, by analogous cases, the effects of chalk on the skin, even when frequently handled by workmen, such as joiners and others.

These four papers were taken together, and after a prolonged discussion, the following resolutions were adopted :—

1. "In consideration of the injurious influence exercised upon the vocal organs by improper use of their functions, and of the insufficient attention hitherto given to the subject of systematic voice training, the members of the Laryngological Section of the British Medical Association desire to urge upon educational governing bodies the importance of a more general recognition of this subject as a distinct branch of education, especially in the case of those preparing for vocations which require much speaking in public. They would suggest the cultivation of at

least an elementary knowledge of the physiology of the vocal organs, and of the principles of scientific vocalization, by school-teachers and others associated with the education of the young."

2. "That the foregoing resolution be forwarded to the General Council for their approval, and consideration as to what steps may be desirable towards giving it practical effect."

Dr. ROBERTSON (Newcastle-on-Tyne) read a paper on *The Treatment of Ozæna and Recurrent Nasal Polypi by opening and draining Highmore's Antrum*.

As regards ozæna he finds that the antral mucosa is more or less deeply affected in all cases, leading, first, to impaired condition of osseous walls and adjoining structures, teeth and inferior turbinals; second, to stenosis of natural opening of antrum, and thus retention of exhalations and excretions from antral mucosa; third, that the contents of the cavity may be fluid pus or inspissated white masses of curdy material lining the walls and of an ozænatous odour, while bony outgrowths are sometimes found partitioning the space; fourth, that these conditions abolish the physiological function of the sinus and react viciously on intra-nasal structure and function; fifth, that opening the sinus by a large perforation in its anterior wall and clearing out contents, curetting mucosa, etc., at once stops crust formation and fætid odour, and leads to an exhaustion of ozænatous process. In the case of recurrent nasal polypi, in the course of the disease the antral mucosa becomes affected and reacts on the intra-nasal condition, especially on the middle turbinal, thus perpetuating or propagating intra-nasal conditions. Polypoid degeneration of antral mucosa is met with along with distinct polypoid growths and partitioning septa in the space. The absence of pus does not contra-indicate an unsuccessful result from operation. In these cases of recurrent polypi coincident lacunar disease of the middle turbinal is often found. No operation short of a perforation in the anterior wall capable of affording a complete digital or ocular examination of interior of cavity is of any service, while such a perforation affords a painless sinus and one facilitating a prolonged aeration and douching of the sinus until intra-nasal conditions, which are notoriously long in resolving themselves, are restored to their normal state.

The author in operating at first, some years ago, employed dentists' drills, but now employs the mallet and chisel. Where extensive operation is not securable a little cocaine and an ordinary gimlet to perforate the anterior wall answers readily, much more so and less painful than perforating the nasal wall of the sinus. As a diagnostic step this is the most feasible and surgical of all such recommended, no injurious instrumental service, expensive or otherwise, being required. The paper further refers to the frequency of double antral implication (empyema, etc.). In a list of seven cases, there occur six double to one single case. A reference was also made to the frequent association of middle ear affections (acute otitis, recurrent otitis, media purulenta, tinnitus, etc.) with antral disease, and to the cure of these being effected when the antral condition was remedied.

Dr. ADOLPH BRONNER.—*On Trichloracetic Acid in the Treatment of Ozæna.*

So many remedies have recently been recommended for the treatment of ozæna that it seems almost superfluous to suggest any more. But the very fact that a new remedy is brought forward so frequently proves that the present method of treatment is not altogether satisfactory.

Stanislaus von Stein recommended the use of trichloracetic acid at the International Congress of Otology and Laryngology, Paris, 1889.

I have since tried the acid in many cases of ozæna, and it seems to me to be, if not altogether infallible, certainly more efficacious than most other remedies. I use a ten to fifty per cent. solution in water, and apply it to the turbinated bones and septum two or three times a week for several weeks. A small piece of cotton-wool is twisted on to a silver or aluminum probe, dipped into the solution, and then rubbed most energetically over the whole of the diseased mucous membrane. The cocaine spray is used before and after the operation. The region most difficult to cure is often that of the upper turbinated bone, to which part special care should be given. In many cases the naso-pharynx is also affected, and we then often find remains of old post-nasal growths.

Before applying the acid to these parts I scrape the growths with Hartmann's curette. Of course, when the maxillary sinus or ethmoidal or sphenoidal cells are affected, we must first treat and cure these before we can hope to cure the nose. I published several of these cases in the "Lancet" of July 24th, 1890.

In addition to the application of the trichloracetic acid—which can, of course, only be done by the surgeon—I recommend the patient to use an alkaline douche frequently, to which in some cases aluminum-acetico-tartaratum (Schaeffer, "Deutsche Med. Woch.," No. 23, 1885) is added.

I never order Weber's douche, but a two-ounce india-rubber ball, with which greater force can be used, and the crusts thus more readily removed. I also order a snuff, consisting of aluminum-acetico-tartaratum, menthol, camphor, and boric acid, to which aristol or euphorine can be added.

Dr. WATSON P. WILLIAMS read a paper on *The Dyspeptic Sore Throat.*

Dr. DUNDAS GRANT read three papers.

Practical Points in the Diagnosis and Treatment of "Fish-bones in the Throat."

In the case of a patient who had had a herring bone "in her throat" for a week, Dr. Dundas Grant, after carefully inspecting the tonsils, employed the laryngoscope mirror in his left hand—his usual way—without detecting the foreign body. On using it with his right hand he was able to see the point of a very fine bone projecting from the inner and back part of the right lingual tonsil and touching the lingual surface of the epiglottis. The bone was too fine to be felt with the finger, or with any instrument. He found that by exercising pressure with his left fingers in the patient's right submaxillary region while she uttered sounds, the point of the bone became sufficiently extruded from the lingual tonsil for him to see it in a left-handed laryngoscope. He then removed

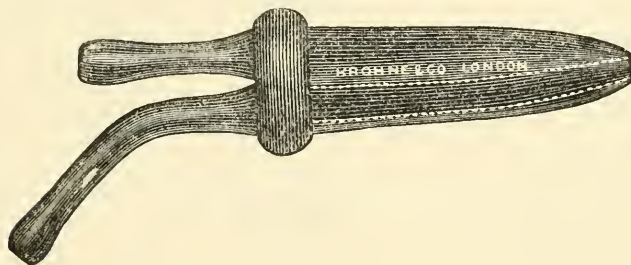
it by means of Mackenzie's tubular forceps, giving the patient complete relief from the severe pain and discomfort she had felt for a week.

From this experience he deduced the following practical points :—

1. To examine carefully the lingual tonsil, no matter how low down the patient may think the bone is situated.
2. To use the mirror in the other hand if the foreign body is not revealed by its use in the one usually employed.
3. To exercise pressure in the submaxillary region while the patient phonates in order to cause an impacted fish-bone to extrude from the inner aspect of the lingual tonsil.

A Safe Nasal Douche.

In view of the danger of exciting middle-ear inflammation by the use of the nasal douche, especially in cases in which the opposite nasal fossa is too much obstructed to allow a ready efflux of the injected fluid, Dr. Dundas Grant devised a double-current nose-piece, the tube of exit lying in the centre of the tube of entrance.



It will be seen that should the fluid find any resistance in the nostril it can find its way back by the exit tube. Moreover, a swelling of the mucous membrane might obstruct the tube of entrance, but the other, from its central position, would escape.

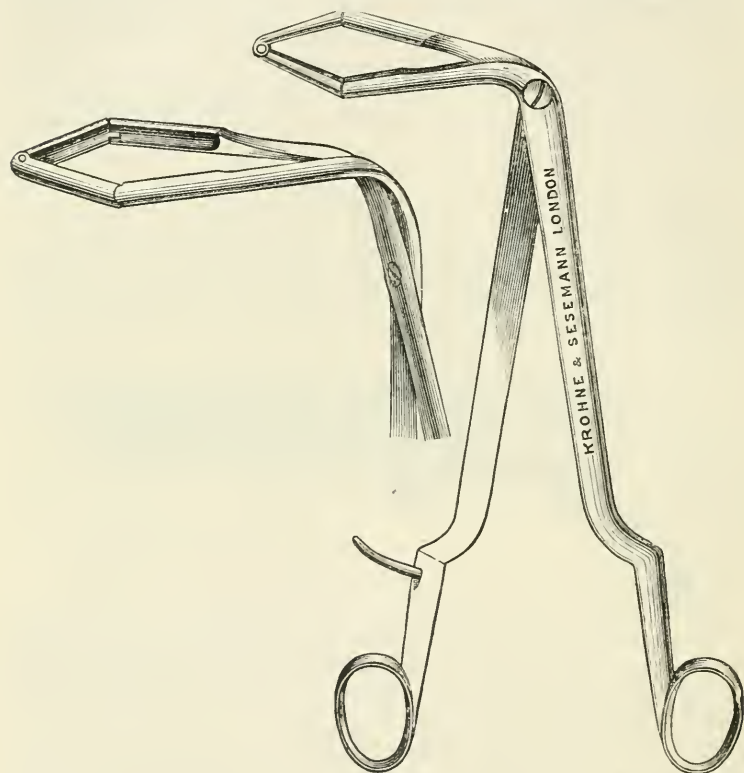
As an improvised substitute Dr. Grant has used the following :—The tip is cut off a number three or four gum elastic catheter, and the cut end is pushed through a very small slit cut in the side of an india-rubber tube (of about three-eighths of an inch in diameter), and about half an inch from its extremity. The india-rubber tube may be introduced into the nostril as the influx tube of a syphon nasal douche, and, as will be readily understood, in case of excessive pressure there will be an escape through the catheter.

He would confine the use of the nasal douche to cases of ozæna and caries, substituting the coarse spray for it in all other forms of nasal disease.

A Safe Endo-Laryngeal Forceps.

Dr. DUNDAS GRANT showed a modification of Mackenzie's forceps, in which a prolongation was hinged to the extremity of each blade. These prolongations were further hinged to each other at their points. It will be seen that when the forceps is opened there is a lozenge-shaped space

formed by the blades and their prolongations. The blades and the prolongations are made with cutting edges, and lateral growths in the glottis can be snipped off by their means without any anxiety as to the possibility of the framework of the larynx being gripped, as has been known to have



occurred in the use of the ordinary unguarded forceps. Movement on the part of the patient and want of skill on the part of the surgeon are made less dangerous. This forceps offers many of the advantages of the snare.

The instrument is made in two forms, one with lateral and the other with anterior and posterior blades.

Friday, July 29th.

The proceedings began by a discussion on *Granular Pharyngitis; its Etiology and Treatment*, introduced by T. MARK HOVELL, F.R.C.S. Ed., and LENNOX BROWNE, F.R.C.S. Ed.

Mr. HOVELL said :—

The reason why granular pharyngitis is still frequently overlooked by practitioners who are unaccustomed to the use of the laryngoscope is probably partly due to the granules which produce the discomfort being

often situated behind the posterior pillars of the fauces, and consequently concealed from view until the pillar is pushed aside. In my experience, hypertrophied tissue, either in the form of a ridge or a string of granulations, is frequently found in this situation when there are few, or even not any, granulations elsewhere, and I disagree with those who consider that hypertrophied tissue is only found behind the posterior pillars of the fauces in cases of old standing.

To give the distinctive term of "*pharyngitis lateralis hypertrophica*" to the thickened tissues in this region, no matter to what extent they may be involved, is, I consider, a mistake. The disease is still granular pharyngitis, and I fail to see any benefit derived by a distinctive name being given to its occurrence in a particular part. In passing, I may mention that I have found that enlarged granules in this situation have a tendency to keep up catarrh of the Eustachian tube, and that their destruction may, therefore, become necessary before a healthy condition of this portion of the mucous lining of the middle ear can be obtained.

The most frequent exciting cause of granular pharyngitis in the cases of males is improper use of the voice, and consequently it is usually found in those whose avocation at times requires continuous or forced vocal efforts. The proximate cause, however, is not merely speaking in a loud tone, so that the voice may be heard above other sounds, but most frequently is the result of the strain put upon the pharynx by improper voice production, or speaking for a length of time when the throat is in a catarrhal condition. Although in these cases the immediate exciting cause has been undue use of the voice, it will frequently be found on enquiry that for some time past the general health of the patient has been impaired, and in many cases dyspeptic symptoms have been present for a considerable period.

The disease, however, is by no means uncommon in females, and as many cases occur amongst those who do not make excessive or improper use of the voice, other causes for this affection must be sought. As exciting causes, a damp condition of the atmosphere and east winds stand prominently forward. Patients suffering from this affection who live in a damp locality often experience immediate relief in residing in a dry atmosphere, but the discomfort in the throat comes back as soon as they return home, and it is not uncommon for the presence of rain or the prevalence of an east wind to be detected by increased discomfort in the throat before the sufferer has had an opportunity of otherwise ascertaining the state of the weather. In the majority of these cases also the general health of the patient is impaired, in fact it is unusual to find granular pharyngitis occurring in an otherwise healthy individual.

Although most authors who have written on granular pharyngitis are agreed that it is found co-existing with impairment of the general health, dyspepsia, anaemia, derangement of the bowels, etc., I think sufficient stress has not been laid on the necessity for directing treatment in the first instance to the removal of these conditions, and that too much attention has been paid to local applications, under the belief that the disorders above alluded to were secondary to the throat affection.

I am of opinion that stomach derangements or hepatic congestion

exist, as a rule, prior to the throat affection, and in many cases are the cause of granular pharyngitis. However this may be, the fact remains that granular pharyngitis will not be cured by local treatment whilst dyspeptic symptoms, etc., remain, and moreover treatment directed entirely to remove the dyspepsia or the engorged condition of the liver may cure the throat affection without local remedies being employed, provided the latter has not existed sufficiently long for the hypertrophied tissue to become very dense in texture.

The discomfort in the throat produced by granular pharyngitis is usually worst in the evening, at a time when the fatigue produced by the day's work is experienced, and the pain is felt not only by those who have had to use their voice during the day, but also by those who have refrained from speaking as much as possible, the increase of pain in these latter cases being clearly attributable to fatigue, irrespective of voice production.

These facts tend to confirm the view to which I wish to call attention, viz., that in many cases granular pharyngitis should be regarded rather as a local manifestation of a general disorder than as a throat affection which happens to occur in an individual not in robust health, or which produces the impairment of the general health with which it is found associated.

There is a tendency to consider that the correct treatment for all cases of granular pharyngitis is the immediate destruction of the granules with the galvano-cautery, and that a tonic merely as an adjunct to treatment is in some cases desirable, but I am of opinion that treatment in many cases should be primarily directed to the improvement of the general health, and that the use of the galvano-cautery should be reserved for the removal of granules which continue to cause irritation when other symptoms have subsided.

Some of the worst cases of granular pharyngitis which I have met with in women have occurred in individuals who were suffering from chronic uterine disease, and to cauterize the granules in such cases, with the intention of curing the throat affection, would in my opinion be as unscientific as it would be found futile.

I do not intend to imply for one moment that the cautery should not be used in the treatment of granular pharyngitis, because I am well aware that in many cases it is not only necessary to destroy the hypertrophied tissue, but that the galvano-cautery is the best method by which that end can be obtained. I merely contend that it is unnecessary in some cases, and that when used, it is best employed in many cases after general treatment has been given, and the local irritation also lessened by soothing applications.

When there is much congestion a weak alkaline solution sprayed through the nostrils into the naso-pharynx often gives relief, especially when rhinitis is also present, nasal obstruction being a frequent cause of the continuance of the pharyngeal trouble. Astringents are of use in the later stages, and, as a rule, weak applications are more beneficial than strong ones.

The object of this paper is to point out that constitutional disturbance

often precedes the local trouble, and that treatment therefore in these cases should be directed, in the first instance, to the primary cause; also that the use of the galvano-cautery should be reserved for the destruction of the granulations which do not disappear when remote sources of irritation have been removed, and milder forms of local treatment are not efficacious.

Mr. LENNIX BROWNE followed with a paper dealing with the causes of the malady which is popularly known as "clergyman's sore throat," to the absurdity of which term he called attention; such a definition is sufficient to condemn its own existence.

After briefly noticing the various constitutional states, and the occupations which may predispose to or be direct causes of the disease, the author proceeded to discuss two main points, neither of which has received the attention which it undoubtedly deserves.

The first was the absolute importance of free nasal breathing in patients of all ages—a rational deduction, from the fact that children with blocked nostrils, causing mouth-breathing, almost always suffer from chronic pharyngitis.

The second point insisted on was that it is not *over use*, but *abuse*, of the voice, from faulty methods in respiration and voice production, which is at the root of the evil, and here comes in the reason for this malady being called "clergyman's sore throat," the affliction, however, not being peculiar to a particular profession, but rather a result of wrong use or over use of the vocal function.

Mr. Lennox Browne clearly demonstrated the folly of those who teach that rest alone, however complete or long continued, can cure a defect in the production of the voice, and he concluded with an earnest hope that those who are entrusted with the treatment of such cases will direct their efforts to curing the defect in the method of producing the voice, as the only preventive of recurrence after the local symptoms shall have been once efficiently treated.

Dr. BARR, of Glasgow, read a paper on *The importance of guarding against Injury to the Middle Ear when Treating the Nasal Passages and Naso-Pharynx*.

The paper contained a report of cases, showing the care necessary in treating such, and illustrative cases were mentioned.

The proceedings closed with a few remarks from the PRESIDENT, in which he said he thought the members had reason to be pleased with the success of the work of the section.

PARIS SOCIETY OF LARYNGOLOGY, RHINOLOGY, AND OTOTOLOGY.

May 6, 1892.

The "Otic Sign" in Cerebral Affections. Value of the Binauricular Accommodative Reflex. By Dr. GELLÉ.

In a previous clinical study carried out in Dr. Charcot's wards, Dr. Gellé made some researches as to the origin of the binauricular accommodative reflex, and was

led by the signs present in a case of cervical pachymeningitis to locate it in the cervical medulla (*vide* "Etudes d'Otologie," vol. 2, p. 60). Since then he has had two opportunities of observing facts confirmatory of this opinion. One of his pupils is now publishing a work on this subject, *à propos* of a case observed and followed up by him, in which the absence of the phenomena of synergy has been recognized in spite of complete integrity of the organs, and of the function of hearing.

Clinical observation shows the importance of the determination of the presence or absence of this sign, whether or not there was auditory disturbance, in affections of the middle ear, or of the internal ear, as well as in any intra-cranial diseases whatever, involving vertigo, noises in the ears, deafness, facial paralysis, &c.

Supposing there was disease of the drum of the ear, Gellé has shown, in a work on the innervation of the tympanic muscles, the inferences to be drawn from this sign in recognizing in the results of deep otitis a lesion of the tensor tympani, its consecutive inactivity or paresis, since pressure exercised in the healthy ear causes synergic contraction of the muscle of the diseased ear (*vide* "Facial Paralysis and Otitis"). Absence of this transmission of synergic excitation occurs in sclerosis as a mechanical effect, explained in the same way as the simultaneous loss of the effect of centripetal pressure on the perception of the tuning-fork on the vertex, added to the other signs of middle ear disease. When a hæmorrhage or an inflammation has seriously damaged the contents of the labyrinth the reflex is equally wanting; it is absent on both sides, its loss coincides with well-marked deafness, and the various disorders of equilibration which make up the syndrome of labyrinthine lesion. On the other hand, in hyperæsthesia and in anæsthesia nothing of the kind occurs ordinarily; the reflexes are intact in most cases of hysterical hemi-deafness. Dr. Gellé has worked out this subject in the statistics of the otological clinic at the Salpêtrière for 1890-91.

The following case shows the disappearance of the reflex in unilateral traumatic deafness.

First Case. No. 430. Lutz, a man aged forty, locksmith, sent by Dr. Catuffe, fell from a ladder a height of four mètres; loss of consciousness, bleeding from the left ear and from the nose; return of consciousness in six hours; one month in bed. Immediately after the accident there was complete deafness, with intense noise in the left ear, continuous vertigo aggravated by movement, inability to stand or walk. The pain disappeared gradually, the head remained heavy and confused, but intelligence returned completely from the very first. Examination of the left ear showed: drum intact, semi-opalescent above, not congested, light-spot distinct, manubrium little inclined, mobility to Siegel's speculum normal. The tuning-fork on the vertex and on the left mastoid heard in the right ear. On closing the left meatus the fork was still heard in the right ear. There was no autophonia and no hyperacusis. Centripetal pressure on the right side gave a positive result (Gellé's experiment), and in the left ear there was equally an attenuation of the sound, with slight giddiness. Reflexes *nil*; there was no change in the aerial condition on the right side when pressure was exerted in the left ear. On inflation (Politzer) there was a tympanic crepitation and displacement without vertigo. Ophthalmoscopic examination made by Dr. Koenig showed no change in the fundus.

During two months no change took place in the condition of the ear, but the head got clearer, and the vertigo on movement less marked.

Second Case. No. 259. P., aged forty-two, strong and well developed, while exposed to great heat in a factory was seized with vertigo of such severity as to cause him to fall, without loss of consciousness, but with ringing noises in both

ears, and shrill whistling sounds in the right one, which has remained deaf ever since. There was no objective sign of disease in the ear; pressure in the right ear was negative, as was also the reflex. The vertigo diminished under treatment, but the other symptoms remained the same. The left ear is excellent; the tuning-fork on the vertex is perceived by the left ear; on the right the perception of tuning-fork vibrations is very doubtful. The urine is loaded with uric acid.

The case is obviously one of hæmorrhage into the labyrinth, without any other cerebral or auricular complication.

It is, however, in cases of cerebral or intra-cranial lesions that the investigation of the binauricular reflex is of most interest, and it disappears in a fair number of instances whether there are otic manifestations or not. From the analysis of clinical facts it has been made out that loss of the reflex coincides with lesions of the medulla oblongata, especially of the protuberance, whereas it is rare in affections of other parts of the encephalon—at least in disease of the cerebrum this seems to be the case even in presence of extreme deafness.

The following cases illustrate this point:—

Third Case. No. 373. H., aged twenty-one, speaks with difficulty, hears by the left ear only, slow speech spoken with a loud voice. At the age of three he suffered from meningitis, according to his father's account, and he has remained deaf ever since. The conducting apparatus appeared to be perfectly natural on both sides. The tuning-fork on the vertex is heard on the left side only, and when held opposite the meatuses is heard only by the left ear. The watch tick is heard on the left side at five centimètres, and not at all on the right. Centripetal pressure is positive on both sides, and *the binauricular reflexes are perfectly preserved.* The Eustachian tubes are free, the nose and pharynx normal, vertigo is quite absent.

The lesion appears to be cerebral, and the deafness unconnected with any auricular lesion.

Fourth Case. No. 39 has had total transient deafness at the time of an attack of hemiplegia, which brought it on. It is a case of cerebral syphilis, and at present the watch is heard at the distance of one mètre on both sides. Centripetal pressure is positive, *the reflexes normal*, the organs of hearing quite natural.

Fifth Case. No. 277. H., affected with right hemiplegia with aphasia, dating from three months previous, has perfect intelligence and good hearing, and understands well, but has a difficulty in expressing himself. He hears the watch at fifty centimètres on the right and thirty on the left side. Pressure gives positive results, *the reflexes are normal.*

The following cases are of greater interest, as showing the usefulness of the sign and its value in the localization of an intra-cranial lesion and in diagnosis in general. Gellé's statistics for 1891-92 have afforded three clear cases demonstrating this opinion, out of thirty-two cases of disease of the nervous centres submitted to him for examination.

Sixth Case. No. 308. March 16th, 1891. L., aged twenty-seven, was suddenly attacked ten days ago with violent headache, vomiting, severe vertigo preventing him from rising from his bed, no tinnitus, but diplopia from paralysis of the left external rectus, and paresis of the left facial nerve. The watch heard at more than a mètre on each side. There is slight nystagmus, the pupils are normal, the patient says there was at first a slight degree of deafness. Centripetal pressure is positive on both sides, the drums are mobile, the tuning-fork on the vertex heard equally by both ears, and auricular pain is absent. *The binauricular reflexes are completely abrogated.*

The lesion is clearly situated in the course of the left facial and sixth nerves. Hearing is not affected but the reflex is lost. The localization of the disease is therefore in the protuberance.

Seventh Case. No. 353. September 5th, 1891. A woman of thirty-five was suddenly attacked fifteen months ago with right hemiplegia and left-sided deafness and facial paralysis. At present the facial paralysis has diminished, but the patient still drags her right leg. She complains of slight buzzing in the left ear, the tuning-fork on the vertex is heard equally by both ears, though indistinctly, but on the mastoid it is quite audible. Watch and tuning-fork (aerial conduction) not heard on the left side, but the watch is heard at eight centimètres from the right ear, which hears the tuning-fork quite well. Pressure is positive on the right side, negative on the left. The *reflex is absent* when pressure is exercised on the deaf ear.

Clinical observation has taught us that the reflex persists in cases of hysterical hemi-anæsthesia, or of deafness due to cerebral disease and not to an affection of the ear, labyrinthine or otherwise. The disappearance of the reflex in this patient indicates the existence of other conditions, and the presence of cross-paralysis points to a lesion in or near the protuberance; the reflex centres have been affected, and the "otic sign," the loss of the synergic reflex coincident with deafness, seems to define the seat of the lesion (neoplasm or hæmorrhage) as at the point of origin of the facial and acoustic nerves in contact with the protuberance.

The following case has been published in Dr. Gellé's paper on "Facial Paralysis and Otitis," and is here given in *résumé*.

Eighth Case. Mademoiselle D., aged twenty-three, was suddenly seized three months ago with headache, repeated vomitings, and severe vertigo; then with slight and transient right hemiplegia, as well as persistent paralysis of the right facial and sixth nerves. There is no pain in the ears, nor loss of hearing. The effects of pressure in both ears are normal, but the *reflexes absent* on both sides.

The diagnosis is one of tumour or plastic products at the level of the emergence of the right facial and abducent nerve, close to the protuberance. The conducting strands and reflex centres have in this case been affected, and the "otic sign" confirms the localization of the disease.

DR. PERCEPIED (Mont Dore.) *The Nasal Douche and its Indications.*

The attention of medical practitioners has long been drawn to the accidents which may follow the use of the nasal douche, accidents of which the most common is suppurative middle-ear disease. Many cases have been brought forward, and the writer has himself reported several in a communication made before the Medical Society of Rouen in 1885, while insisting on the proper precautions to take, and while giving details of the *technique*, which need not here be repeated. Since that time he has had the opportunity of seeing several accidents of the same kind. One of his friends, who had long been accustomed to use the douche, was attacked with middle-ear inflammation with prolonged suppuration extending to the mastoid cells, and calling for trepanation of the mastoid process at the hands of Dr. Lubet-Barbon. A second case was communicated by Dr. Hélot of Rouen. A little girl sent to a thermal resort was submitted to treatment by naso-pharyngeal irrigation, which led to median otitis with otorrhœa, lasting more than a year.

The writer is persuaded that many more cases would be reported if enquiries were made of specialists and of physicians practising at mineral water spas.

Fortunately this occurrence is not frequent, but it has to be feared when Weber's douche is used. There are, however, other unfortunate results which are perhaps to be classed as inconveniences rather than serious accidents. These are

entrance of water into the frontal sinuses, causing considerable discomfort, or into the air-passages (as has happened to most *débutants* in the use of the douche) bringing on fits of coughing, or into other sinuses. Reflex disturbances may also occur in sensitive persons from irritation of the pituitary membrane. The writer has seen attacks brought on in asthmatic patients by the use of the nasal douche.

To obviate these inconveniences various means have been recommended. Weber-Liel, renouncing Th. Weber's method of continuous irrigation, makes use of injections of water containing a very small quantity of bicarbonate of soda by means of a syringe. According to him, this solution, even if introduced into the tympanum, would not set up otitis, or at least not to the extent of causing perforation of the membrane. Percepiéd does not consider this system superior to that of continuous irrigation, but, on the other hand, much more troublesome to the patient if any considerable quantity of water—say, three or four litres—has to be passed through the nose.

Water slightly alkalized is certainly a good liquid application, and very little irritating, but after it has passed through the nasal fossæ, whatever may be its chemical composition, it is certainly no longer aseptic, and in entering the tympanum may carry with it the micro-organisms which are so abundant in these passages, and set up serious mischief. Over and above this, the composition of the liquid is, for Weber-Liel, only a very precarious guarantee, as he considers that for the production of otitis by the nasal douche it is not necessary for the fluid to enter the tympanum, as a simple chill is sufficient. The writer has not yet seen an example of this, and until further order will continue to attribute this accident to the entrance of liquids, whether medicated fluids or nasal secretions. This, however, does not take place during the act of douching, but afterwards when the patient blows the nose.

Dr. Ball, of New York, adopting the method of Dr. Pins, of Vienna, has proposed the use of an ingeniously constructed bottle, by which fluid is driven into the nose by the patient's own blowing effort. During this forcible expiration the soft palate is raised so as to shut off the naso-pharynx. Not having experience with the instrument, Dr. Percepiéd hesitates to criticize it, but judges *à priori* that it must be very fatiguing for the patient to force any great quantity of fluid through the nose by its means.

These improvements have not seemed sufficiently great to take any hold in practice, and Weber's syphon is still the only form of apparatus of practical utility. The *irrigateur* can only meet with disapproval, as the pressure is too great, unless the tap is turned so far as to diminish too much the cross-section of the passage of outflow.

Whatever instrument is used, the nasal douche will never cease to be a disagreeable mode of treatment, occasioning fits of coughing, headache, and congestion, leaving the patients with suffused watery eyes, and sometimes it is so painful as to deter the patients from its use.

In the face of these objections, are there any beneficial effects to justify the further use of the method? In some cases, if safeguarded by the necessary precautions, there are, but it must be added that for some years there has been a veritable abuse of the douche, and it seems as if with many there was no other method of treatment than the irrigation of the nose with various liquids. At the mineral water spas the nasal douche forms the basis of treatment for every nasal or pharyngeal disease.

Before going further, we have to meet the objection urged against us, that patients are the better for the treatment. To this we reply that not all are so. At mineral spas the results are due to an aggregation of means and not the douche alone.

A friend of the writer's, practising at a bathing resort, took a certain number of patients, suffering from spasmodic rhino-bronchitis, having frequent transient attacks of coryza, and sneezing fits coming on on the most trifling provocation. Of these some were treated with nasal irrigation, others without it, and the latter got exactly the same amount of relief as the former. It was notorious in the spa that great improvement as regards the tendency to coryza took place after one season spent there before any nasal douching was thought of.

In thus condemning the abuse of this remedy, we do not wish to deny the good effect of certain fluids applied to the pituitary membrane. We object to the mode of application, and ask whether sprays (*pulvérisations*) are not equally efficacious? We would use the latter mode in general, reserving the douche for those cases in which there are crusts to detach or secretions to wash out. The douche does good service in *ozæna*, and in it cannot be replaced by any other process. It is the washing rather than the contained fluid which is of importance, and sterilized water, injected vigorously by means of the English syringe, appears to be in these cases the principal means of treatment. In cases in which the secretions are too abundant, if there is no acute disease, and if the nasal fossæ and pharynx are free, the douche may be usefully employed, but there being no crusts to detach, Weber's syphon douche, with a medium pressure of 0.50 to 0.60 centimètres, is all that is required. It happens only too often that they are ordered improperly for persons suffering with nasal polypi, and for children the subjects of post-nasal adenoids.

En résumé, in order to act on the nasal mucous membrane by means of liquids, the writer employs sprays and limits the use of the douche to those cases where simple washing is required.

The writer brings this question before the Société de Laryngologie, though of little interest to it, devoid of novelty, and one on which the opinion of all the members is no doubt identical with his own, on account of the readiness with which many medical men in ordinary practice, and especially at the various spas, order the nasal douche, frequently without supervision or instruction. He calls upon the society to exercise its legitimate authority to warn practitioners against the abuse of a method of treatment occasionally dangerous and often quite useless.

Statistical Note on Suppurations of the Middle Ear complicated with Mastoid Inflammation. By Dr. HAMON DU FOUGERAY (Le Mans).

Suppurative median otitis is, without doubt, one of the affections of the ear which we meet with most frequently in practice, and its treatment merits all the attention of the surgeon. Whether acute or chronic, we see it fairly often followed by complications of which the most important is inflammation of the mastoid. Neglect or bad treatment of this complication may lead to death. All authors agree upon this point, but there is considerable diversity of opinion as to the best line of action in presence of inflammation of the mastoid cells.

Ought the cells to be opened by trephine or some other means, or ought we to wait and confine ourselves to antiseptic treatment? The latter is the view expressed by Dr. Loewenberg in 1885 and, far from changing his opinion, he is more and more convinced that opening the mastoid should only be practised in very rare cases. At the same period Schwartz enunciated his five indications for trepanation of the mastoid as we find them reproduced by various authors, and in 1887 Dr. St. John Roosa published in the "*Archives of Otology*" an important article in which he concluded by saying that opening the mastoid should enter more and more into practice, and holding that the only indication at all open to doubt is the one in which the only object of the operation is to afford better drainage to the tympanum, the mastoid being outwardly sound.

In 1889, Cozzolino in an article with statistics ("Annales des Maladies de l'oreille, du nez et du larynx") said: "We should always commence with the most simple form of treatment, and only have recourse to the more radical when rendered necessary by the inefficacy of the former, and especially by the imminence of cerebral complications." These few examples show the diversity of opinion.

The writer, during seven years of otological practice, has seen a good number of cases with mastoid complications, but has never required to open the antrum, all having recovered under antiseptic treatment solely. In the last five years he has seen the complication forty-two times. Of these, thirty-two presented the clinical features of inflammatory reaction, and in ten the skin was already perforated in one or more places, these perforations being the anterior opening of fistulæ which allowed the probe to reach the tympanum. In these ten cases pus exuded by the meatus and by the fistulæ.

It is right to say that these were all cases of chronic suppurative otitis. In the provinces, where the facts of otology have hardly taken hold of the public and of medical practitioners, most of the cases which come under the observation of the specialist are chronic. Consequently the symptoms of involvement of the mastoid have usually been the result of absence of treatment or erroneous treatment, the most dangerous method being the poultice. The writer has not had to note any cases of cerebral complication. By chance he met with two cases in 1891, one in a man aged forty, but as usual he was not called in till the patient was moribund.

En résumé, he has thirty-two times observed the mastoid become painful in the course of chronic otitis, and recurring several times in the same patient if treatment was suspended. In ten other cases Nature had operated and formed fistulous openings.

The following is the writer's plan of treatment:—

1. Irrigation with a warm sublimate solution of 1 in 2000 to cleanse the meatus and tympanum of all the products of suppuration;
2. Drying with absorbent wool;
3. Dabbing the bottom of the passage with a pledget of wool soaked with camphorated naphthol, or the injection of a few drops into the tympanum through the perforation;
4. Removal of vegetations and polypi whenever they develop.

In the ten cases in which the mastoid was already traversed by fistulous passages, the following additions were made:—

1. A drainage tube introduced as deeply as possible through the fistula;
2. Irrigation with 1 in 1000 sublimate solution was practised through it;
3. Camphorated naphthol was injected.

The fluid introduced through the fistula emerged by the meatus.

Dr. Fougerey selected camphorated naphthol in preference to other substances on account of the excellent results previously obtained from its use, confirming thus the experience of Dumont in Gouguenheim's clinic at the Lariboisière Hospital. Before 1889 he used boric acid in powder, or, better, in small crystals or dissolved in alcohol. He has not given it up, and employs it if the naphthol irritates or causes pain. For some time he has tried camphorated salol, which seems less irritating. In the cases of fistulæ he uses camphorated naphthol exclusively, and has had excellent results. Thus the duration of treatment in the ten cases has varied from one to two months, resulting in complete recovery and very little impairment of audition.

He does not bind himself down never to operate, but he holds that operative

interference should be postponed till necessary. Thus in the case of the man of forty already cited he would, if he had been called in at the commencement of the complication, have trephined the mastoid or opened it with gouge or chisel, and if necessary, as shown by cerebral localizing indications, would have gone further; and similarly would do what was called for in the case of a sequestrum.

He would not, however, subscribe to Schwartz's five propositions. (*Chirurgische Krankheiten des Ohres*. Stuttgart 1889.)

Experience has shown him that a *genuine antiseptic treatment carried out regularly during the necessary period of time* staves off mastoid complications, and, when they commence to show themselves, arrests their further development. Camphorated naphthol has given him such excellent results in the fistulous cases that he thinks it preferable to every other form of antiseptic.

A New Process for the Catheterization of the Eustachian Tube. By Dr. LOEWENBERG.

Dr. Loewenberg justified his placing before the meeting such an elementary subject as Eustachian catheterization on the ground of the utility of making widely known any method susceptible of facilitating this operation, which presents difficulties not alone to beginners but, here and there, to veterans in otology.

As regards the hindrances which may be found in the *first stage of catheterization*, while the point of the instrument is traversing the nasal fossa, the chief cause is, as is well known, the deformities of the septum, distinguished by Loewenberg as the "horizontal inferior deviations." In a memoir on the subject ("Progrès Médical," 1883), he made known a method of avoiding them by inspection with the frontal mirror and a special form of speculum during the operation. By using this method he considers that it need never be necessary to catheterize by the opposite nostril.

In the present paper he is concerned only with the *second stage*—that is, when the point is about to leave the nasal fossa and reach the *orifice of the Eustachian tube*—how to recognize that we are really opposite the pharyngeal opening of this canal.

Formerly he recommended turning the point inwards and then drawing it back against the posterior border of the vomer, and lastly a rotation downwards turning it to the Eustachian tube.

The new method here submitted and hitherto unpublished is intended to guide the operator during this second stage, and has been practised by the writer for years, as he has found it more certain, more universally applicable, and at the same time less disagreeable than the method formerly recommended.

The following is the method:—The catheter is passed through the nasal fossa, the point being kept in contact with the floor of the cavity. *As soon as it seems likely to have reached the posterior extremity of its intra-nasal transit, the patient is ordered to make THE MOVEMENT OF DEGLUTITION.* One of two things then occurs: either the hand which holds the catheter feels no movement, and the instrument is thereby known not to have passed the nasal fossa, or a movement is felt, and it is clear that the tip has entered the naso-pharynx, the impulse being given by the rising soft palate. In the first case the instrument must be pushed further until a movement is felt on the performance of deglutition.

What is the mechanism of this phenomenon? We know that during swallowing the velum palati becomes tense and rises vigorously for a moment, making, as it has been called, a "broad back." It then comes forcibly in contact with the catheter, and jerks the point which is in the naso-pharynx.

This is not all, because the proceeding tells us whether the point of the instrument is opposite the mouth of the tube or has passed it, and how much, in this

way :—The soft palate in rising rotates round its attached border. Therefore the further any point of it is from the place of attachment, the greater is the degree of movement, and the greater therefore the amount of impulse conveyed to the catheter. One may judge therefore, with a little practice, to what depth the instrument has penetrated into the pharynx, whether its point is opposite the tubal orifice, or if it should be withdrawn somewhat and, if so, how much. This movement of withdrawal is easily accomplished while the catheter glides over the upper surface of the velum, and, combined with rotation of the instrument, effects the guidance of its tip into the mouth of the tube. Sometimes the movement of deglutition alone is sufficient for this purpose.

If executed with the lightness of hand, and the rapidity indispensable in catheterization, this proceeding causes neither pain nor nausea. The contact of the instrument with the velum is of very short duration, and what one does here knowingly must not be confounded with what would occur if the point of the instrument wandered for any length of time in the naso-pharynx, especially if the patient respired by the mouth. Loewenberg orders the patient, on principle, to keep the mouth closed, and *to breathe through the nose during the whole time of catheterization*. This mode of breathing implies the lowering of the soft palate, and, following the method here described, only comes in contact with the instrument during deglutition, consequently only in a transient way ; and, further, during the performance of a cyclical physiological act, which takes place in spite of the operative intervention. Furthermore, if by chance there occurred exaggerated reflex contractions of the pharyngeal muscles, it would only be necessary, in order to check them, to renew the instructions to the patient to breathe by the nose, the mouth being closed. Instantly the soft palate would fall, and the tumultuous contractions would cease.

Loewenberg is convinced that the process just described will be serviceable not only to beginners but to experienced aurists. Although the skilled otologist generally succeeds in catheterizing at the first attempt, he is sometimes obliged to feel about before finding the tubal opening. According to the writer's observations the obstacle is usually *an anomaly in the depth of the nasal fossæ*, which, in some subjects, is much greater or much less than supposed *à priori*, judging from the conformation of the head and the dimensions of the external nose. Even the preliminary measurement, taken according to the data of Itard, Gairal, Gellé, and others, is often insufficient to demonstrate this want of accord.

On the other hand, the method here described keeps us right as regards this point, and saves the patient the disagreeable sensations that would be induced by an attempt to rotate the catheter while still engaged in the nasal fossæ, or by its introduction into the fossæ of Rosenmüller instead of into the tube.

These uncertainties may recur at each *séance*, especially if the operator has so many patients that he cannot remember the topographical peculiarities of each. Dr. Loewenberg, in order to avoid feeling about at subsequent interviews, proceeds in the following way :—When in any case presenting these difficulties he has succeeded in introducing the instrument, for the first time he makes a note of the depth to which it has entered the nasal fossæ. This can be read off on catheters graduated in centimètres and millimètres, or when using ordinary instruments can be noted by marking on them the point which touches the tip of the nose by means of pen and ink, or equally well one of those pencils of Faber's which write on glass or metal, and which are used in bacteriology for marking culture-tubes. For example :—"X., catheter No. 24, projects three-and-a-half centimètres." At subsequent visits it is only necessary to again mark the catheter at a point three-and-a-half centimètres from its outer orifice, and to push its point into the nasal

fossæ until the mark corresponds to the tip of the nose, when the beak of the instrument will be absolutely opposite the tubal orifice.

There is no reason that this should not be done equally in cases presenting no particular difficulty. The catheterization is often much shortened by it.

An analogous process serves also in cases of aural affection in which there is on one side some difficulty in finding the place. A rallying-point is found by marking the length of instrument necessary for the side which is easy to catheterize and utilizing it for the other.

NOTES.

MESSRS. BURROUGHS, WELLCOME & Co. send us two photographic souvenirs of the recent British Medical Association Meeting at Nottingham, and desire us to state that they are willing to send one of these souvenirs to any medical man upon request.

CHARLES WARDEN, M.D., F.R.C.S., Edin., Senior Honorary Surgeon to the Royal Orthopædic and Spinal Hospital, and the Ear and Throat Hospital, and Consulting Surgeon to the Royal Deaf and Dumb Institution, Birmingham, has been placed by the Lord Chancellor on the Commission of the Peace for the City of Birmingham.

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THROAT AND EAR PRACTICE IN GREAT
BRITAIN.

WE have been requested to publish a list of the institutions and hospitals in this country where the practice of these specialties may be followed. As such information may be of service to many of those practitioners who visit our country annually from our colonies, America, and the Continent, we have sought to make it as complete as possible. With the month of October medical teaching for the winter months becomes active in all British centres. While formerly but few general hospitals possessed special departments devoted to Laryngology, most London hospitals now have met this demand. Though in many of these institutions the practice of these specialties can be followed only imperfectly, excellent departments exist in others. While it would not be becoming to individualize, it may certainly be admitted that, in London at least, it is at the special hospitals devoted to these diseases that the practitioner and advanced student will find the greatest amount of clinical material for observation and practice, and at most of these institutions systematic teaching is carried out.

LONDON SPECIAL THROAT AND EAR HOSPITALS.

The Hospital for Diseases of the Throat, Golden Square. Founded 1863.

Accommodation for 21 adult beds, and a children's ward. Out-patients, 7000 (30,000 attendances); in-patients, 419; out-patients attend daily at 2.30, and on Tuesday and Friday evenings at 6.30. Laryngoscopic and rhinoscopic instruction is given daily by the members of the staff, and post-graduate lectures are given in a winter and summer course. Fee for three months' hospital attendance and instruction, three guineas; for six months (perpetual), five guineas.

Staff: Physicians, Drs. Norris Wolfenden, J. W. Bond, Greville Macdonald, and F. G. Harvey; Surgeon and Aural Surgeon, Mr. Mark Hovell; Registrar and Pathologist, Mr. Richard Lake, F.R.C.S. A number of clinical assistantships are open to those with a registered medical qualification. Instruction in the examination of cases, treatment and manipulation of instruments is given daily to students who have entered the hospital.

The winter post-graduate course will commence in October, and lectures will be given two evenings a week, and demonstrations daily. The prospectus will be fully advertised in the weekly medical papers.

*The Central London Throat and Ear Hospital, Gray's Inn Road.
Founded 1874.*

Accommodation for 17 beds. Out-patients, 6675; in-patients, 288; out-patients attend daily at 2.30, and Tuesday and Friday evenings at 5.30. Fees, for three months' attendance, two guineas; for six months, three guineas. A course of lectures is given during the winter months, and is free to qualified practitioners and advanced students. These lectures are duly advertised in the weekly medical journals.

Staff: Consulting Surgeon, Mr. T. W. Nunn; Surgeons, Messrs. Lennox Browne, Arthur Orwin, Dundas Grant, Percy Jakins, Carmalt Jones; Assistant Surgeons, Messrs. Walter Fowler, W. Wingrave; Registrar and Anæsthetist, Dr W. G. Holloway. Clinical instruction is given daily.

*The London Throat Hospital, 204, Great Portland Street, W.
Founded 1887.*

Four emergency beds. Out-patient attendances, daily at 2.30, and Tuesday and Friday evenings at 6.30. Clinical demonstrations are given daily, and instruction to students of the hospital. Fees, for three months' attendance, two guineas; one month, one guinea.

Staff: Consulting Surgeon, Mr. Sydney Jones; Medical Staff: Messrs. W. McNeill Whistler, Edward Woakes, George Stoker, W. R. H. Stewart, Arnold Woakes, Edward Law; Assistant-Surgeon, G. C. Wilkin; Anæsthetist, Mr. G. H. Bailey.

This hospital is affiliated to the London post-graduate course. Lectures and demonstrations are given on Thursday evenings at 8. This course is advertised in the weekly medical journals.

*Metropolitan Throat and Ear Infirmary, 25, Howland Street, W.
Founded 1838.*

Out-patient attendances, 3800.

Staff: Consulting Surgeons, Messrs. Saunders and J. H. Drew; Surgeons, Messrs. Pickett and Nesbitt.

Royal Ear Hospital, Frith Street, Soho Square, W. Founded 1816.

10 beds. In-patients, 153; out-patients, 2742.

Staff: Surgeons, Drs. Urban Pritchard, F. Matheson, and Cheatele.

The *clinique* of the hospital is open to medical practitioners and advanced students by previous arrangement with the secretary.

South Belgravia Dispensary for Diseases of the Throat, Chest, and Ear,
78, Lupus Street, W. Founded 1876.

300 attendances weekly.

Physician, Dr. Crane. Surgeon, Mr. A. Phillips.

SPECIAL DEPARTMENTS AT GENERAL HOSPITALS.

DISEASES.	HOSPITAL.	DAYS.	NAME.
Throat	St. Bartholomew's	Fridays, 2.30	Mr. Butlin.
Ear.....	"	Tues. and Fri. 2	Mr. Cumberbatch.
Throat	Charing Cross	Fridays, 9.30	Dr. Willcocks.
Ear.....	"	"	Mr. M. Sheild.
Throat	St. George's	Thursdays, 2	Dr. Whipham.
Ear.....	"	Tuesdays, 2	Mr. Bull.
Throat	Guy's	Fridays, 1	Mr. Symonds.
Ear	"	Tuesdays, 1	Mr. Laidlaw Purves.
Throat	King's College	Fridays, 1.30	Mr. Burghard.
Ear	"	Thursdays, 2	Prof. U. Pritchard.
Throat	London		Mr. Hovell.
Ear.....	"	Saturdays, 9.30	Dr. Woakes.
Throat	St. Mary's	Tues. and Fri. 1.30	Dr. S. Spicer.
Ear.....	"	Mon. and Thurs. 3	Mr. Field.
Throat	Middlesex	Tuesdays, 9	} Mr. A. Hensman.
Ear.....	"	"	
Throat	St. Thomas's	Tues. and Fri. 1.30	Dr. Semon.
Ear.....	"	Mondays, 1.30	Mr. Ballance.
Throat	University College		Dr. Poore.
Ear.....	"	Mon. and Thurs. 9	Mr. Pollard.
Throat	Westminster	Wednesdays, 9	Dr. de Havilland Hall.
Ear.....	"	Mondays, 9	Dr. Black.*
Throat	Gt. Northern Central	Thursdays. 2.30	Mr. Spencer Watson.
Ear.....	"	Mon. and Fri. 2.30	Mr. W. H. R. Stewart.
Throat	Hosp. for Consump- tion, Brompton	Fridays, 11	Dr. Percy Kidd.

A course of demonstrations or lectures is given at most of the general hospitals.

PROVINCIAL SPECIAL HOSPITALS.

Birkenhead Eye and Ear Hospital. Established 1879.

6 beds. Surgeons, Drs. Pinkerton and Wallace.

Cheltenham Eye, Ear, and Throat Infirmary. Established 1889.

4 beds. Surgeons, Messrs. F. A. Smith and S. W. Smith.

Southampton Free Eye and Ear Hospital. Established 1889.

10 beds. Surgeons, Messrs. J. F. Bullar and J. A. Powell.

Tunbridge Wells Eye, Ear, and Throat Hospital. Founded 1878.

6 beds. Surgeon, Mr. G. Abbott.

Liverpool Eye and Ear Infirmary, Myrtle Street. Established 1839.

46 beds. Surgeons, Messrs. Browne, R. Williams, and Lee.

Liverpool. Hospital for Diseases of the Throat, 47, Mount Pleasant. Established 1884.

Surgeons, Messrs. Grossmann and J. Bark.

Liverpool. St. Paul's Eye and Ear Hospital, 6, St. Paul's Square. Established 1871.

24 beds. Surgeons, Messrs. G. E. Walker, Pughe, and Moir.

Manchester Ear Institution, 23, Byrom Street. Established 1855.

6 beds. Consulting Physician, Dr. Simpson. Consulting Surgeon, Prof. Williamson; Surgeons, Messrs. Pierce and Pinder; Assistant Surgeons, Messrs. Cox and Milligan. The surgeons attend daily, except Saturday, at 2 o'clock. Dr. Milligan gives a series of post-graduate demonstrations twice a year.

Manchester Hospital for Consumption and Diseases of the Throat, Hardmann Street. Established 1875.

38 beds. Consulting Staff, Drs. Young and Simpson. Physicians, Drs. A. Hodgkinson, Ransome, and Harris. Assistant Physicians, Drs. Moritz and Blore.

Newcastle-upon-Tyne Throat and Ear Hospital. Established 1877.

6 beds. Surgeons, Messrs. Ellis, Macaulay, Robertson, Hepworth, and Metcalfe. Surgeons attend daily at 3 p.m. Demonstrations are given daily.

Shrewsbury Eye, Ear, and Throat Hospital. Established 1818.

20 beds. Surgeon, Dr. Charnley.

Bath Eye and Ear Infirmary. Established 1837.

Surgeon, Mr. King.

Brighton, Hove, and Sussex Throat and Ear Hospital, 23, Queen's Road. Established 1878.

6 beds. Surgeons, Messrs. Baber, Scatcliff, and Treves.

St. Leonards Hospital for Consumption and Diseases of the Throat and Chest. Established 1884.

23 beds. Physician, Dr. Gambier.

Birmingham and Midland Ear and Throat Hospital, Edmund Street. Established 1844.

Consulting Physician, Sir W. Foster; Surgeons, Messrs. C. Warden, J. St. J. Wilders, W. Wilson, and C. J. Lewis.

Bradford Eye and Ear Hospital. Established 1857.

50 beds. Surgeons, Messrs. Bell and Bronner ; Assistant Surgeons, Messrs. Taylor, Johnston, and Dodd.

Sheffield and South Yorkshire Ear and Throat Hospital.
Established 1880.

4 beds. Consulting Physician, Dr. W. G. Holmes ; Consulting Surgeon, Mr. Ellis ; Physician, Dr. Hardwicke ; Surgeon, Mr. R. Jones.

Cardiff Eye and Ear Hospital. Established 1887.

Consulting Surgeon, Dr. Brailey ; Surgeons, Messrs. Milward and Ensor.

SCOTCH SPECIAL HOSPITALS.

Edinburgh Eye, Ear, and Throat Hospital, 6, Cambridge Street.
Established 1834.

6 beds. Consulting Surgeons, Drs. J. Bell and Kirk Duncanson ; Surgeons, Drs. G. Hunter Mackenzie, Ross, A. Black, Sym and Spence.

Glasgow Ear Institution, 241, Buchanan Street. Established 1887.
Surgeons, Drs. Erskine and Robb.

Glasgow Hospital and Dispensary for Diseases of the Ear,
28, Elmbank Crescent. Founded 1880.

12 beds. Surgeon, Dr. Barr ; Assistant Surgeons, Drs. Adams and Connell.

SPECIAL DEPARTMENTS.

Edinburgh Royal Infirmary.

Surgeon, Ear and Throat Department, Dr. McBride.

Assistant Surgeon „ „ Dr. R. McK. Johnston.

Edinburgh Western Dispensary.

Surgeon for Diseases of the Throat, Dr. Hunter Mackenzie.

Glasgow Central Dispensary.

Diseases of Throat, Drs. Fullerton and Macintyre.

„ Ear, Dr. J. Erskine.

Glasgow Royal Hospital for Sick Children.

Aural Surgeon, Dr. T. Barr.

Glasgow Royal Infirmary.

Surgeon for Diseases of the Throat and Nose, Dr. Newman.

„ Ear, Dr. Macfie.

Glasgow Western Infirmary.

Surgeon for Diseases of the Ear, Dr. Barr.

“ “ Throat, Dr. J. Walker Downie.

Glasgow Polyclinic.

Surgeon for Diseases of the Throat, Nose, and Ear, Dr. J. Walker Downie.

COURSES OF INSTRUCTION IN SCOTLAND.

At Anderson's College Medical School, Glasgow.

A winter course on Aural Surgery is given by Dr. John Barr, and on Diseases of the Throat by Dr. John Macintyre.

Hospital practice is obtained in the Royal Infirmary and Western Infirmary.

At the Western Medical School, Glasgow.

A winter course on Diseases of the Throat and Nose is given by Dr. H. Brown Kelly.

Hospital practice is obtained in the Western Infirmary.

At St. Mungo's College and The Glasgow Royal Infirmary.

A winter course on Diseases of the Throat and Nose is given by Dr. D. Newman.

At the University of Aberdeen.

A summer course of instruction in Diseases of the Ear and Larynx is given by Dr. Mackenzie Booth.

At the University of Edinburgh.

A winter course on Diseases of the Ear is given by Dr. Kirk Duncanson, and on Diseases of the Ear and Throat by Dr. M'Bride.

 IRELAND.
Belfast Ophthalmic Institution, Eye and Ear Hospital.

Established 1844.

30 beds.

Ulster Eye, Ear, and Throat Hospital, Belfast. Established 1871.

30 beds. Consulting Physician, Prof. J. Cuming. Physician and Surgeon, Dr. McKeown.

Cork Eye, Ear, and Throat Hospital. Established 1868.

30 beds. Consulting Physician, Dr. Cummins. Consulting Surgeon, Dr. Hobart. Surgeon, Dr. Sandford. Surgeons attend daily at 10.30. Demonstrations are given on Tuesdays and Fridays.

*Dublin. National Eye and Ear Infirmary, Molesworth Street.
Established 1814.*

30 beds. Consulting Physician, Dr. Banks. Consulting Surgeon, Mr. W. Colles. Surgeons, Messrs. Swanzy and Fitzgerald. Assistant Surgeons, Messrs. Redmond and P. W. Maxwell.

Dublin. St. Mark's Ophthalmic and Aural Hospital and Dispensary for Diseases of the Eye and Ear, Lincoln Place. Established 1844.

50 beds. Consulting Physician, Dr. Little ; Consulting Surgeons, Sir G. H. Porter and Dr. E. H. Bennett ; Surgeon, Dr. Story ; Assistant Surgeons, Drs. Benson and Odevaine.

SPECIAL DEPARTMENTS IN SCHOOLS OF MEDICINE.

Adelaide Medical and Surgical Hospital.

Aural Surgeon, Dr. Swanzy.

City of Dublin Hospital.

Aural Surgeon, Mr. A. H. Benson.

St. Vincent's Hospital.

Aural Surgeon, Mr. D. D. Redmond.

Royal College of Surgeons.

Professors of Ophthalmic and Aural Surgery, Professors A. H. Jacob Fitzgerald and Story.

THERAPEUTICS AND DIPHTHERIA.

Chappell, W. F. (New York).—*Europhen in the Treatment of Throat and Nose Diseases.* "Med. Rec.," April 23, 1892.

IN atrophic rhinitis Dr. Chappell cleanses with a half per cent. solution of creolin, and then blows in powder of europhen so as to cover the parts. He finds the discharge become yellow, then watery, and the mucous membrane red and puffy. After operations he finds it valuable as a hæmostatic and antiseptic.

Dundas Grant.

Belfield, Wm. T. (Chicago).—*On the Use of Iodine Trichloride in Surgery.* "Med. Rec.," July 16, 1892.

IN crystals or dissolved in distilled water or alcohol this compound is stable, but in contact with any animal matter in solution—urine, pus, blood, saliva, meat infusions, etc.—it is split up into iodine and chlorine. A one per cent. aqueous solution sterilizes cultures of staphylococcus or streptococcus. Belfield has used it in suppuration in general, tuberculosis, ammoniacal cystitis and venereal sores, and has found it more efficacious

than iodoform or hydrogen peroxide. It is caustic in strong solution, and injures clothing and instruments. For hypodermic use he employs one-tenth to one-half per cent. solution in distilled water, or in one of glycerine to four of water. For suppurating wounds he uses for irrigation from one to five per cent. in distilled water, alone or with glycerine; for putrid surfaces (cancerous), venereal sores, etc., a five to twenty per cent. solution in equal parts of water, glycerine, and alcohol. [Miller found a 1:2000 solution the most effective agent for sterilizing the mouth.—*JOURNAL OF LARYNGOLOGY*, Sept., 1891.] *Dundas Grant.*

Freudenthal, W. (New York).—*Poisoning by Creosote*. "Med. Rec.," April 23, 1892.

THE author, a believer in the great efficacy of creosote in large doses, describes a case in which most exceptional symptoms presented themselves. The patient, with tuberculous disease of throat and chest, was ordered drops consisting of one part of creosote (beech-wood) to two parts of compound tincture of gentian. Of this combination two drops were taken three times a day in water, each day one drop more being added to each dose. Thus the dose was rapidly increased to one hundred drops without any discomfort as long as the patient was able to get out, but when her child's illness kept her indoors the creosote made her dizzy, as though she had taken strong wine. She resumed the drug when again able to be out of doors. She got up to three hundred drops, and, one day not feeling well, she very soon after one dose took a second of the same quantity. She had then to go to bed, where she lay unconscious for eight or nine hours like one in narcosis. Her teeth were clenched, her lips cyanotic, pupils contracted and immobile, pulse 128, and respirations about 30. Ammonia was held under the nose, a mustard foot-bath was given, and ice was applied to the head. She recovered, and was able to resume the medication. The case shows what large doses can be tolerated, and also the intoxicating effect of doubling a large dose.

Seeing the uncertainty of the size of "drops," Freudenthal recommends the administration of creosote in pill mass with liquorice enclosed in capsules.

In cases of creosote poisoning, if external excitants prove ineffective, large quantities of soluble sulphates should be given, as Hare has experimentally found them antidotal. *Dundas Grant.*

Penrose, Geo. R. (Washington).—*The Treatment of Pulmonary Tuberculosis by Creosote*. "Med. Rec.," April 9, 1892.

Dr. PENROSE enumerates the most important communications on this subject, and adds his strong opinion in favour of the method. He considers that the doses should be large. He commences with a teaspoonful of an emulsion of cod liver oil and acacia thrice daily, containing two minims of creosote. Nausea, if threatening, is prevented by the patient lying on his back for half-an-hour after taking the medicine. After a week the dose of creosote is increased to three minims, and by slow degrees the patient is got to take six minims eight or ten times a day. He uses only Merck's beech-wood creosote, and believes his results are

better than those obtained from the use of guaiacol. Without having effected actual cures, he claims to have restored many to a capacity for active work who would otherwise have died.

Dundas Grant.

Medin (Stockholm).—*The Treatment of Diphtheria*. "Eira," 1892, No. 9.

THE author treated forty-five children with diphtheria with local treatment, consisting of painting of the throat with a half per cent. solution of sublimate, combined with a five per cent. solution of tartaric acid. Only three deaths occurred.

Holger Mygind.

Ozegowski.—*A Method of Treatment of Diphtheria*. "Nowiny Lekarskie," 1892, No. 3.

THE author during ten years has not had one case of death resulting from diphtheria, thanks to his treatment, which is as follows :—With a wad he brushes every two to three hours the parts which are covered with membranes, using the following solution : Rp. Acidi carbolici crystalis ; acidi nitrici crystal ; kal. iodo aa 3,00—5,00 ; Cognac (fine champagne), 100,00. In older children he advises, besides, gargling with a solution of chlorate of potash or common salt. He does not permit the use of milk, As a drink, he gives lemonade, made of lemon juice.

John Sedziak.

Smith, Lewis J. (New York).—*Recent Investigations relating to the Prevention of Diphtheria and Scarlet Fever*. "Med. Rec.," Apr. 23, 1892.

MOST cases were the result of contact with the sick. He recommends appropriate precautions, including a blouse for the doctor, interposition of a pane of glass when examining the patient, &c. He also advises two teaspoonfuls of the following to be added to one quart of water, and allowed to simmer constantly near the patient : Oil of eucalyptus, one ounce ; carbolic acid, one ounce ; turpentine, eight ounces. The after fumigation of the room is more effectual if the sulphur is burnt over a receptacle containing water.

Dundas Grant.

Thursfield.—*Outbreaks of Diphtheria and Scarlatina coincident with Febrile Eruptions in Cows*. "Brit. Med. Journ.," Jan. 3, 1892.

SIX out of nine of a family (as well as two cats) took diphtheria ten days after a febrile attack, with pustular eruption on udders of the three cows forming their stock-in-trade. The symptoms in two resembled experimental diphtheria. The house, isolated in position, was in good sanitary condition, and no other cases were near at hand. The cats, which died, showed true febrile diphtheria. *Ergo*, in every case of udder disease forbid the milk supply.

Wm. Robertson.

Wissing, Joh. (Copenhagen).—*The Treatment of Diphtheria*. "Ugeskrift for Laeger," 1891, No. 6.

RECOMMENDATION of turpentine inhalations based upon the observation of one case successfully treated in this way.

Holger Mygind.

Reiersen, A. (Copenhagen).—*Diphtheria and its Principal Complications, especially in regard to its Treatment and Prevention*. Copenhagen, 1891.

IN this book the author advocates strongly the local treatment of diphtheria by means of the galvano-cautery, or Paquelin's thermo-cautery,

with subsequent use of disinfectant solutions, and in cases of general infection sudorific treatment.
Holger Mygind.

Bloodworth.—*Notes on the Treatment of Diphtheria by Hydrogen-peroxide.*
"Therap. Gazette," May 16, 1892.

EFFECTUAL when used as spray or gargle. *B. J. Baron.*

Kraus (Berlin).—*Application of Tribromate of Iodine in Diphtheria.* "Archiv für Kinderheilk.," Band 14, Heft 1.

THE author has applied the medicament in three cases with good result.
Michael.

PHARYNX AND LARYNX.

Linsley, Joseph H. (New York).—*The Micro-Organisms of the Mouth.*
"Med. Rec.," July 16, 1892.

IN a paper read before the Vermont State Dental Society the author protested against the prevalent application of the name *leptothrix buccalis* to every thread. A short account is given of the modes of making the bacterioscopic examination of the mouth, and of the most important of Miller's well-known investigations (*vide* JOURNAL OF LARYNGOLOGY, Sept., 1891). A word of warning is uttered with regard to the communicability to patients of pathological conditions from which the dentist may be suffering, especially tuberculosis.
Dundas Grant.

Morrice, G. G. (London).—*On Perforations through the Anterior Pillars of the Fauces.* "Lancet," July 16, 1892.

THE writer quotes Dr. Walter Fowler's clinical note ("Lancet," Nov. 30, 1889), in which he expresses the opinion that these perforations are caused by suppurative or phlegmonous mischief in the tonsils, and generally as the result of scarlet fever. Dr. Morrice narrates three cases in which the cause was diphtheria. In two an oval piece of the left anterior pillar sloughed out, and post-diphtheritic sequelæ occurred. In the third a small hole formed in the right anterior pillar. He has seen perforation and partial destruction of the soft palate from scarlatina, but considers that diphtheria is the cause of the most complete and permanent perforations.

[Several authors have reported cases of this rare condition, in which they believed the perforations to be congenital. Max Toeplitz ("Arch. of Otology," 1892, No. 1) described a bilateral case, and gives references to the literature of the subject. Bosworth, after Cohen, describes the condition as separate mucous investment of the palato-glossus muscle.]

Dundas Grant.

White, J. R. (Grays, Essex).—*Case of Swallowing Fishbones.* "Lancet," Aug. 6, 1892.

A PATIENT with abdominal pain and tenderness and pyrexia had swallowed a large piece of fishbone about a month previous. The symptoms were almost those of enteric fever. About a week later he passed per

anum several pieces of fishbone, one a piece of the backbone nearly an inch long with spines attached. Recovery speedily followed.

Dundas Grant.

Williams, Alfred (Manchester).—*Fatal Hemorrhage from Impaction of Bone in Œsophagus.* "Brit. Med. Journ.," Feb. 6, 1892.

ACCIDENT to a man while eating a chop. Pain on swallowing. Examination with horse-hair probang failed to detect the foreign body. On seventh day a little blood was brought up at first in the morning, and about mid-day a large quantity, followed by death immediately. *Post-mortem*, bilateral perforation of œsophagus, that on left piercing aorta one-eighth of an inch above first right intercostal branch.

Wm. Robertson.

Symonds (London).—*Papilloma of the Larynx.* "Brit. Med. Journ.," Feb. 6, 1892.

SPECIMEN shown, removed from a boy by thyroidotomy, to which operation objection was taken owing to the risk to the voice.

Wm. Robertson.

Taylor.—*Tracheal Tugging associated with Aneurism of Arch of Aorta.* "Brit. Med. Journ.," Jan. 30, 1892.

PATIENT shown, illustrating the phenomenon.

Wm. Robertson.

Hunt.—*Treatment of Phthisis.* "Brit. Med. Journ.," Jan. 30, 1892.

RELATES a preference for antiseptic intra-laryngeal injections, and a reference to successful results from a residence at Davos Platz.

Wm. Robertson.

Frankel, Eugen (Hamburg).—*Etiology of Primary Laryngeal Croup.* "Deutsche Med. Woch.," 1892, No. 24.

OF four cases which died from so-called true croup (in all, the pharynx was free from pseudo-membranes, but the larynx and trachea were covered with pseudo-membranes, which could be easily removed without any loss of substance of the mucous membrane), the author has made exact bacteriological examinations, and has found in all cases Loeffler's bacillus. He concludes that idiopathic croup of the larynx is etiologically identical with that laryngeal croup which is combined with the genuine pharyngeal diphtheria.

Michael.

West, S. (London).—*Case of Hysterical Paralysis of the Abductors of the Larynx and of the Diaphragm, associated with Peculiar Movements of the Palate.* "Lancet," Aug. 6, 1892.

A WOMAN, aged thirty-eight, was admitted with dyspnœa, dilatation of the *alæ nasi*, and flushing of the face, but no cyanosis. The breathing was entirely confined to the upper part of the chest, the diaphragm ascending instead of descending, and the intercostal space being indrawn during inspiration. The larynx remained fixed [no "excursion" such as accompanies laryngeal obstruction]. There were peculiar movements of the palate [a clerical error has crept in, so that the word "expiration" occurs in two places, in one of which it ought to have been "inspiration."—ED.] The vocal cords were nearly apposed during inspiration, but separated

to the cadaveric position during expiration. They were quite white, but the patient spoke with a hoarse voice. The arytenoids did not move towards the middle line on inspiration [they pivoted so as to invert the vocal processes.—ED.], but left a triangular space posteriorly. The abductors were obviously paralysed. On phonation the arytenoid cartilages approached each other, and therefore there was no paralysis of the posterior or oblique arytenoid muscles. There was a history of previous functional clenching and fixation of the jaws. The breathing was much quieter during sleep, and a diagnosis of hysteria was made. Chloroform was administered as a test, but she took it badly, and its further use was wisely avoided. The interrupted current was freely used, and on one occasion intubation was practised. A sudden remarkable improvement took place, and was irregularly maintained.

Dundas Grant.

NOSE AND NASO-PHARYNX.

Stewart (Nottingham).—*The Nasal Cavities and their Diseases.* "Brit. Med. Journ.," Feb. 6, 1892.

PAPER read.

Wm. Robertson.

Heryng and Rajchman (Warsaw).—*On the application of Electric Transillumination to the Examination of Cavities and Organs of the Human Body.* "Gaz. Lekarska," 1892, Nos. 9 and 10.

THE author reports his further results of transillumination of the antrum of Highmore. In thirty cases he recognised purulent inflammation of this sinus, without recourse to exploratory puncture (Schmidt's method). He further speaks of his trials of transillumination of the frontal sinus (Vohsen's method, however, in his opinion is better), as well as of the mastoid processes, together with Dr. Guranowski.

John Sedziak.

Anderson (Nottingham).—*Nasal Hydrorrhœa.* "Brit. Med. Journ.," Feb. 6, 1892.

THE patient, a girl aged nineteen, suffered from clear, watery discharge from the left nostril, increased by inclining the head to the right and downwards. Small alveolar perforation led to no result. A perforation (alveolar), large enough to admit the finger, and curetting of polypi found in antrum, effected a cure in six weeks.

Wm. Robertson.

Bronner (Bradford).—*Asthma of Nasal Origin.* "Brit. Med. Journ.," Jan. 30, 1892.

RECOGNIZES a two-fold etiology from nasal obstruction, and also from nasal irritation. He quite properly recommends an exhaustive intra-nasal examination in all cases.

Wm. Robertson.

Conitzer.—*Naso-Pharyngeal Polypus covered with Hairs.* Aertzlicher Verein, Hamburg. Meeting, May 17, 1892.

THE author showed a case. It exhibited all the elements of the external

skin, glands, cartilages, etc. Only nine similar cases are recorded. Schuchardt believed them to be teratomata. Arnold believed that they were abnormal ectodermoblasts. *Michael.*

Radziszewski.—*Prolapse of an Enormous Polypus from the Choane to the Pharynx, etc.* "Medycyna," 1892, No. 10.

THE case of a female, forty years of age, from whom the author had extirpated several nasal polypi by means of forceps. Some weeks after the patient was brought to him with symptoms of suffocation. On examination an enormous polypus, covering the left posterior nostril, was seen. It was excised with scissors. *John Sedziak.*

Spalding, J. A. (Portland, U.S.A.).—*On the Connection between Diseases of the Nose and Naso-Pharynx and some Diseases of the Eye and Ear.* "Arch. of Otology," 1892, No. 3.

DR. SPALDING insists on the necessity for recognizing the connection between diseases of the nose and certain diseases of the eye which resist local ophthalmic treatment. He instances a case of stricture of the lachrymal duct, which was only tractable after treatment of hypertrophy of the turbinated body. Pain around or above the eyes may depend on frontal sinus trouble. Ulceration or abscess of the cornea from the impact of a barb of grain may lead to serious risk to sight if the lachrymal duct is occluded. He quotes Covetoux ("Annales d'Oculistique," Nov., 1891) in support of his views. Dr. Spalding holds that oculists should be able to treat the nasal condition, and passes "in brief review the best means by which to bring about a rapid cure in such cases." [Then follows rhinology "in a nutshell."—ED.] He gives very judicious warnings in regard to the nasal douche and the prolonged retention of cotton tampons.

The significant connection between diseases of the naso-pharynx and those of the ear is next dwelt on, and Dr. Spalding informs us that "almost every one of the diseases of the middle ear owes its origin to some inflammatory disturbance in the naso-pharynx, extending through the tubes into the tympanum." [Surely the time for reiteration of this, no doubt well-founded, impression is past, and what we look for is an impartial collation of statistical data with which we may convince those who differ in any great degree from this view.—ED.] He reminds us that operative perforation of the membrane in acute otitis does not always preserve the ear, and that the charge of neglect of this operation, brought against those who have the care of cases of the exanthemata is not always justifiable, especially as he believes he has seen many cases of middle-ear suppuration undergo spontaneous cure. He attributes almost every case of chronic catarrh of the middle ear to some catarrhal condition of the naso-pharynx.

He concludes by turning our attention to the larynx. "The aurist ought, in a case of apparent pharyngitis with deafness, to know that the case is not actually one of tubercular laryngitis; and the oculist, in a case of weakness of vision with a huskiness of voice, after pharyngeal diphtheritis, ought to be able to verify in the larynx, in the presence of "a paralysis of the vocal cords, an associated paralysis of the accommodation."

[The earnestness of the writer of this rather homiletic paper must command respect, but we fear he would have the specialist substitute the "something about everything" for the "everything about something." We agree with him that it is impossible for the specialist really to know everything about his specialty unless he knows something about every other specialty. The complete aurist ought, for example, to be a skilled neurologist—in relation to deafness, vertigo, etc. There is no end to the elaboration of the subject, and the limit depends only on the practitioner's capacity.—ED.]

Dundas Grant.

Haske, Th.—*A New Method of Exposing the Naso-Pharyngeal Cavity with its Pneumatic Appendices, without disfiguring the Cadaver.* "Virchow's Archiv," Vol. CXXV., No. 2, 1891; and "Arch. of Otology," 1892, No. 3.

AFTER the removal of the calvaria and brain, the soft parts are dissected down in front and behind, and a sagittal saw-cut is made a little to one side of the middle line, extending through the nasal bones in front, the occipital foramen behind, and most of the intermediate base of the skull. The two halves can be separated with little difficulty. The septum nasi can be removed, to expose the nasal cavity of the side to which it has been left attached. If necessary, further saw-cuts can be made across the sagittal one.

Dundas Grant.

THYROID GLAND AND NECK.

Warren.—*The Operative Treatment of Goitre.* "Boston Med. and Surg. Journ.," May 5, 1892.

A PRACTICAL paper worth reading, but containing nothing specially novel.

B. J. Baron.

Kohler.—*Atrophy of Goitre following Partial Strumectomy.* "Berl. Klin. Woch.," 1892, No. 24.

IN a patient, fifteen years old, with goitre of which each half was the size of a man's fist, the author extirpated the right half. A short time afterwards the left half disappeared spontaneously.

Michael.

Edwards (San Diego).—*Acute Enlargement of the Thyroid Gland; Angio-Neurotic Edema.* "Internat. Med. Mag.," April, 1892.

THE case is that of a girl who suffered from Bright's disease in September, 1888, from which she completely recovered. In October of the same year she noticed a large swelling in the front of the throat, which was connected with the thyroid. By the middle of November it had greatly increased, and on December 5th it had extended all over the front of the neck to the shoulder blades. She died suffocated on December 11th, from compression of all the neck structures, larynx, trachea, carotids, jugulars, etc. Her voice was hoarse, feeble, and finally absent. The swelling was painful only to palpation. The expectoration was bloody and muco-purulent, and she experienced much fever and sleeplessness. All the serous cavities were considered to be free from serum.

Mr. Edwards regards this as a case of vasomotor neurosis in association with Bright's disease, whereby leaking through the vessels is caused. [There ought to have been a *post-mortem* examination.—REP.]

Barclay J. Baron.

Horsley (London).—*The Function of the Thyroid Gland.* "Brit. Med. Journ.," Jan. 30, 1892.

IN a long, interesting paper, critical and historical, the author begins by pointing out the error of supposing the gland to be only a mechanical appendage to the brain circulator, because of its rich blood supply, and refutes the statements of early authors that the symptoms arising after removal of the gland are due to irritation of neighbouring parts, more especially lesions of nerves, such as the laryngeal nerves and vago-sympathetic trunk. These, the author showed, remained uninjured in his thyroidectomies with characteristic symptoms. The different theories of function are passed in review, especial notice being drawn to the (direct and indirect) hæmopoietic function of the gland. The chemical metabolism of the albuminoid constituents of the blood is altered, while changes in the corpuscular elements are gravely marked (alteration in numbers). The changes in the blood are increased vensity, suboxidation, and presence of abnormal elements (mucin). Notice is also made of the influence of the gland over those of the female sexual organs, supported by the greater frequency of myxœdema in that sex. Hypothesis No. 10 states that the gland modifies or destroys substances which, circulating in the blood, are harmful to the general economy, and that it secretes some substance useful to the general metabolism of the body. To support this contention the author devotes the rest of the paper. The nature of thyroid tissue is considered, the principal feature of which is the acinous epithelium, which secretes the colloidal material from the blood, which again finds its way into the blood. *via* the lymphatics. The functional activity of the gland is proved to be greatest during late intra-uterine life, and during youth rapid cachexia, after thyroidectomy, being greatest between ten and thirty years, when active growth ceases. The distribution of the thyroid tissue in the body, and its relation to the pituitary body, receives notice. The fact of hypertrophy of the remains of gland tissue left, and of the increased growth of accessory glands after thyroidectomy is dwelt upon (as also is transplantation of gland tissue), and shown to be capable of restoring the metabolic equilibrium after thyroidectomy, as well as proving the gland generally to be the agent, while at work, that prevents the cachexia.

Wm. Robertson.

Horsley (London).—*Function of the Thyroid Gland (Effects of Thyroidectomy).* "Brit. Med. Journ.," Feb. 6, 1892.

THE author's research shows that flesh feeders suffer most, omnivora less so, and vegetable feeders least. The classification of symptoms is—stage 1, neurotic; stage 2, myxœdematous; stage 3, cretinic. The neurotic symptoms are subdivided—(1) over-action, *e.g.*, tetany; (2) want of action, *e.g.*, motor paralysis. *Neurotic Symptoms*—Morbid anatomy shows lower centres mainly affected (not peripheral), tucheration of the function of the cortex, *e.g.*, stupidity, hebetude, etc. Under

"Symptoms of General Derangement of Nutrition," reference is made to the fact that mucinoid degeneration is due to the loss of the thyroid function. If the cretinic state supervenes, then there is no increase of mucin, but fibroid change and emaciation. "The Disorder of the Heat Changes."—At the onset of spasms and twitchings a rise of temperature is noted. Subsequently a remarkable fall is observed, and a low outside temperature, as is well known, aggravates the condition.

Wm. Robertson.

Croft.—*Glandular Swelling in Neck—Conversion into Pulsating Tumour, etc.*
"Brit. Med. Journ.," Jan. 30, 1892.

A SWELLING after sore throat, situated over upper part of the great blood-vessels of the neck, subsequently becoming pulsatile and expansile. The vessels were secured, and on incising the tumour it was shown to be in connection with an arterial trunk, for which carotids and jugular were tied. No pus was found, and attention was drawn to the disappearance of the inflammatory process. The discussion that followed throws no light on the nature or etiology of the process. The abstractor met with an acute and possibly similar enlargement over the same region after a galvano-cautery operation on the lingual tonsil. Two surgeons pronounced it aneurismal. It was pulsatile and expansile, and of the size of a small egg, and had developed in a few hours after operation. Little or nothing was done, and the tumour had disappeared in fourteen days' time.

Wm. Robertson.

Krowczynski (Lemberg).—*Myxedema*. "Medycyna," 1892, No. 9.

THE author reports two cases of this disorder occurring in young peasants. In both the commencement was not clear. On examination of the first (in the third year of the disease) the characteristic thickening of the skin was especially observed on the face; there was also thickening of the tympanic membranes, with diminution of the hearing, and, after a certain period of observation, thickening of the mucous membrane surrounding the teeth. The second case was analogous. Both females complained of headache, and a certain dejection and apathy were observed in both. In both cases the thyroid gland was diminished. The first female was taken with small-pox in the hospital, after which there was observed in general a diminution of the thickening of the skin, and the patient, moreover, changed for the better in regard to disposition and intelligence.

John Sedziak.

E A R.

Bechtezeff.—*The Striae Medullares of the Medulla Oblongata*. Annotation in "Lancet," July 23, 1892.

THESE striae are developed much later than the roots of the auditory nerve, and therefore Bechtezeff holds that they cannot be connected with it.

Dundas Grant

Guranowski (Warsaw).—*On Foreign Bodies in the Ear.* "Medycyna," 1892, Nos. 8, 9, and 10.

UNSKILFUL trials of extraction of foreign bodies from the ear often produce grave functional disturbances, and sometimes may endanger life, by thrusting a foreign body into the tympanic cavity. In order to avoid these consequences, the author presents different methods of extraction of foreign bodies from the ear, among which he gives the first place to energetic irrigation of the external ear with warm water. *John Sedziak.*

Würdemann, H. V. (Milwaukee).—*Condylomata of the Auditory Canal.* "Arch. of Otology," 1892, No. 3.

THE rarity of the affection may be judged of by Deprès' statistics (quoted by Rupp, "Journ. Cutan. Vener. Dis.," Oct., 1891), giving only six cases of condylomata of the external ear out of 1200 syphilitics, of whom 980 had condylomata in other parts. Otorrhœa usually precedes and probably causes the lesion. The granulations appear much the same as in cases where there is no syphilis, and the diagnosis is established by the history and concomitant symptoms.

He describes a typical case of foul middle-ear suppuration, with a granular raised ulcer on the wall of the external meatus, covered with discharge, but when cleansed reddish-grey, and inclined to bleed upon touch. Under antiseptic treatment the middle-ear suppuration ceased, but the ulcer did not heal. Inquiry elicited a history of syphilis, dating from fifteen years previous. Under appropriate anti-syphilitic treatment this late secondary manifestation rapidly disappeared. [In some cases the resemblance to the condylomata seen so much more commonly round the anus is unmistakable.—ED.]

Dundas Grant.

Spalding, J. A. (Portland).—*Three Cases of Epithelioma of the Auricle.* "Arch. of Otology," 1892, No. 3.

IN a man aged forty-one it commenced as a small scar on the helix, which was irritating and bled as he scratched it. In half a year it was a centimètre in length, and seemed to sink deeper into the tissues, the whole structure feeling abnormally hard. A V-shaped piece was removed, and the remains of the auricle were brought together with stitches. Healing took place, but there was much swelling for some days. The disease recurred, and a second operation was performed two years after.

The second occurred as a ragged sore behind the auricle, occupying the furrow. The disease was abscised and scraped away. No recurrence was observed after three months.

In the third case a nodule had been felt on the back of the auricle for five years. Latterly it had broken open and become painful and liable to bleed. The morbid tissue was removed by means of the knife, and had not returned after four months.

Dr. Spalding is in favour of scraping away the disease with a sharp spoon, and only when unavoidable using the knife. He prefers strapping to sutures for operative or other wounds of the ear. The tendency to relapse of the disease when affecting the auricle he attributes to the facility with which it can be scratched. He has seen epithelioma of the auricle in men only, and never in women.

Dundas Grant.

Du Fougeray, Hamon (Le Mans).—*Note on Aural Polypi.* "Annales des Mal. de l'Oreille, etc.," Aug., 1892.

DEALING with the symptomatology, Dr. Du Fougeray illustrates the extreme severity in rare instances by quoting the case of a lady who at a menstrual period was attacked by what appeared to be cerebral congestion. This passed off with the menses, but recurred with greater violence on their next return. At a third period life seemed in positive danger. The symptoms were violent pain over the whole of the left side of the head, pyrexia, intractable vomiting on the slightest movement, attacks of asystole with violent oppression, pulmonary congestion, aphonia, lividity, frequent cough without expectoration, and tenderness on pressing the pneumo-gastric nerve between the attachments of the sterno-mastoid muscle. She fortunately recovered for the time, and her medical attendant after much trouble traced her affection to the left ear, and referred her to the writer. A polypus was found, and after its removal the patient was entirely free from her trouble. Dr. Du Fougeray considers the symptoms to be due to excitation of the pneumo-gastric.

He objects to the use of the term "polypus" in all cases of pediculated growths, and instances four "polypi" which, pathologically, were entirely different from each other. One was a granulation-tumour, another a papilloma, the third a dermoid, and the fourth a mucous polypus. To the last only he would apply the term, "polypus," the anatomical structure being (1) an epithelial covering equivalent to that of the tympanic mucous membrane, (2) connective tissue like the corium of the mucous membrane, but having undergone certain inflammatory modifications, (3) hypertrophied papillæ, (4) vessels, (5) here and there glands which sometimes form cysts.

Dundas Grant.

Gifford, H. (Omaha).—*Note on the Operation for Reforming the Auditory Meatus.* "Arch. of Otolaryngology," 1892, No. 3.

THE meatus was nearly filled with cicatricial tissue as the result of lupus. This was cut out, and the meatus was scraped with a sharp spoon, and cleaned with peroxide of hydrogen. Thin Thiersch flaps were taken from the fore-arm and plastered over the meatal walls. A glass tube was inserted, and aristol was filled in around it. Healing took place, but recrudescence of the disease in the mastoid cells involved an operation which sacrificed the meatus. [The success following the operation in cases due to lupus ought not to lead to the expectation of similar results in cases of atresia of developmental nature.—ED.]

Dundas Grant.

Richardson, C. W. (Washington).—*Excision of the Membrane and Ossicles in Suppurative Diseases of the Attic.* "Arch. of Otolaryngology," 1892, No. 3.

RICHARDSON rejects Walb's view that disease of the "attic" arises by extension of inflammation from the external ear—furuncle, etc.—through a foramen of Rivini, and agrees with Schmiegclow as to its tubal origin. In support of this he cites a case in which inflammation of the attic occurred in an ear for which Eustachian catheterization, on account of dry catarrh, was being practised, the possibility of external otitis being absolutely excluded. The well-known symptoms are offensive purulent

discharge and the presence of a perforation above the level of the short process of the malleus. Necrosis of the ossicles or outer wall of the attic is detectable by the probe.

If these resist all treatment he practises the operation of removal of ossicles and membrane. Originally the incision was carried from the perforation round the whole membrane to separate it entirely from its ring. The posterior flap was thrown forward, the incudo-stapedial joint divided by means of a narrow rectangular knife, the incus drawn down and removed. The tensor tympani was then cut, the malleus freed, and extracted with the remains of the membrane. Finding that the membrane always regrew, he has modified the operation in his later cases. He now commences by cutting the tensor and the ligaments of the malleus, then makes incisions along the front and the back of the malleus, which he removes. The incus is then examined and left, if sound, but if not, removed. The membrane is then replaced, the canal cleared of blood, and closed with a wad of absorbent cotton impregnated with iodoform. He finds that the later form of operation is followed by more rapid healing than the earlier one.

He quotes C. H. Burnett's conclusions :—

1. That the operation has never failed to stop suppuration, or greatly diminish it, in all cases of chronic purulent otitis media in which he has used it.

2. In attic cases with normal atrium (tympanum proper), the sole perforation being in the membrana flaccida, this operation is the only means of cure.

3. In cases of chronic purulent otitis in which the sole perforation is in the anterior part of the membrana tensa and comparatively small, and while the purulency is limited to the anterior part, this operation prevents its spread to the posterior parts and the dangers thereby risked.

4. It improves the hearing, if any has existed before the operation.

5. It prevents the attacks of vertigo, headache, tinnitus, and earache, which occur so frequently in chronic otorrhœa, especially in children.

[Abstracts of papers on this subject have several times appeared in this JOURNAL, and notably of one by Dr. Milligan in the number for March, 1892.]

Dundas Grant.

Booth, Mackenzie (Aberdeen).—*Mastoid Abscess*. "Brit. Med. Journ.," Jan. 16, 1892.

OPERATION with chisel; patient—a girl, aged ten. Well in fourteen days.

William Robertson.

Randall.—*Mastoid Abscess breaking into the Digastric Fossa*. "Therapeutic Gazette," May 16, 1892.

THERE was, in a patient with aural polypi, gradually developed mastoid suppuration. A red swelling presented behind the ear which was very painful on pressure, but which yielded no pus on incision. Two days afterwards fluctuation was felt beneath the sterno-mastoid, and on pressing on the swollen part the ear filled with pus. Incision and gouging cleared

out foetid pus and *débris*, which had made its way down in the track of the large vessels. The after-treatment consists in plugging the wound with gauze, free drainage and irrigation, and inasmuch as the fluid used tends to go into the pharynx through the Eustachian tube, peroxide of hydrogen, being non-poisonous, is of much value. *B. J. Baron.*

Dench, E. B. (New York).—*Two Unusual Cases of Intra-cranial Inflammation following Purulent Otitis Media with Mastoiditis.* "Arch. of Otology," 1892, No. 3.

A CHILD ten months old had had otorrhœa for nine months. There then developed a diffuse fluctuating mass behind and above the auricle, which was incised over the mastoid. The bone below was rough and bare. Temporary improvement took place under treatment, but, as the opening was healing, exuberant granulations appeared, and, no further advance towards recovery seeming possible, further operation was performed. The instrument employed was found to enter the cranium, obviously through the petro-mastoid suture. The meninges were disintegrated, and the presence of deep intra-cranial mischief was certain. This was preceded by drowsiness and irritability. Cerebral symptoms, indicative of meningitis, became distinct, and death occurred. No autopsy was allowed.

A man of forty, with a history of purulent otorrhœa of four months' duration, had great swelling and œdema behind and above the auricle, extending forwards to the eyelid. The external meatus was swollen, chiefly along the postero-superior and deeper parts, and there was a perforation in the postero-superior quadrant of the membrane. The ordinary mastoid operation was performed, and the bone was found to be denuded for a considerable distance beyond the incision. No improvement taking place, and the œdema of the eyelid persisting, a further operation was performed. The incision was extended forwards, and the bone was found to crumble under the elevator. The meninges bulged, but pulsated. Further appropriate exploration was unavailing. The autopsy revealed hæmorrhagic pachy-meningitis, most marked over the frontal and temporo-sphenoidal regions.

These cases show that sub-periosteal abscess of the mastoid region may lead to serious consequences. Dench cites a case of Andeer's ("Archiv für Ohrenheilk.," 1874, Vol. IX., p. 139), and refers to similar ones published by Pomeroy (Internat. Otol. Congress, 1876, "Archiv für Ohrenheilk.," Vol. XII., p. 313), Reinhard and Ludewig ("Archiv für Ohrenheilk.," Vol. XXVII., p. 218), and Moure ("Arch. of Otology," Vol. XI., p. 25).

[We would recall to our readers' recollection the well-known mechanism of intra-cranial abscess following injury to the skull, in which the mischief spreads through the venous channels in the bones. As a practical rule to be kept well before the mind, Gruber, in his Text-book (Law and Jewell's translation, p. 407), advises that in abscesses behind the ear, opposite *the upper third of the auricle*, incision should be made in the roof of the meatus; in those *opposite the lower two-thirds*, over the mastoid.]

Dundas Grant.

Knapp, H. (New York).—*A Case of the so-called Bezold Variety of Mastoiditis. Opening of Mastoid. Craniotomy. Death. Autopsy. Abscesses in Temporal Lobe and Cerebellum. Sinus Thrombosis on the Other Side.* "Arch. of Otology," 1892, No. 3.

A WOMAN of twenty-five, after attacks of coryza for several months, was affected with acute catarrh of both tympana, which improved. Later on, there were symptoms of mastoiditis on the right side, and some cerebral disturbance—intense headache and giddiness. There was redness and swelling of the inner part of the meatus, with bulging of the postero-superior wall, redness of the membrane, but no discharge. The mastoid region was red, swollen, and tender, and the swelling extended down the sterno-mastoid muscle. Pus issued on incision being made in this swelling. After operative opening of the mastoid gradual irregular improvement took place, but a similar swelling appeared on the left side. This diminished, but she had some headache, followed by drowsiness and double optic neuritis, without much fever. Operation was proposed, but refused for some time. Cerebral symptoms getting more marked, consent for operation was obtained. The outer surface of the mastoid (right) was chiselled away, and part of the inner table removed. No pus was found, and the dura mater and sinus appeared healthy. The attic was opened without material result, and the middle fossa was then explored. There was no extra-dural pus, the dura did not pulsate, and both it and the surface of the brain were incised. Both appeared healthy, and the operation was given up. A temporary improvement preceded death.

On autopsy, the anterior part of the lateral sinus was thrombosed, the posterior part filled with pus, which extended into the longitudinal and left lateral sinuses and the left sub-mastoid swelling. Two abscesses were found, one in the right temporal lobe, the other in the right hemisphere of the cerebellum. On the medial wall of the tip of the mastoid process there was a small but distinct perforation of the bone leading into the digastric groove.

The cultivations made from the cerebellar abscess showed that its pus was sterile, whereas those from the temporal abscess showed a multitude of cocci (*staphylococcus aureus* and *albus*) and a bacillus.

Knapp makes the following remarks with regard to the significance of the subjective cerebral symptoms in middle-ear inflammation:—(1) *Transient headache, nausea, vomiting, and dizziness* in acute cases indicate meningitic irritation, from which recovery is usual, without operation. (2) *Persistent headache, nausea, vomiting, and dizziness*, especially when the discharge from the ear diminishes, indicate transition to real meningitis, demanding operation on the membrana flaccida when bulging, or on the mastoid. (3) *The above symptoms, with delirium stupor, impediment of speech, chills, spasms, drowsiness, and coma*, signify fully-developed intra-cranial suppuration. The diagnosis of its exact form is doubtful in many cases, but usually demands surgical interference, namely, opening the posterior cranial fossa to ligate and cleanse the lateral sinus, or opening the posterior or middle fossa to liberate the extra-dural accumulation of pus, or evacuate an enccephalic abscess. [An abstract of Prof. Guye's cases appeared in the JOURNAL OF LARYNGOLOGY for September, 1892.]

Dundas Grant.

Dean, H. Percy (London).—*A Case of Cerebellar Abscess successfully treated by Operation.* "Lancet," July 30, 1892.

A GIRL came under Dr. James Anderson's care for pain in the head. He traced it to chronic middle-ear disease, with mastoid inflammation, and referred her to Mr. Dean, with a view to operation. The middle ear and mastoid were treated by the usual operative measures, proving also the normal condition of the sinus, and there was improvement for a few days. The girl then became drowsy, and had occasional slight headache. Her temperature was subnormal, but suddenly, for one observation, ran up above 102°. The drowsiness increased, and Mr. Dean operated again. He turned down a skin-flap, and one of periosteum, applied a three-quarter inch trephine, with the pin an inch and a quarter behind, and half an inch (elsewhere he specifies a quarter of an inch) above the centre of the external (osseous) meatus. The sinus was exposed below, and the dura bulged considerably above. He incised the dura, and punctured the temporo-sphenoidal lobe and lateral ventricles without finding pus or diminishing the bulging. The lateral sinus was then punctured with a fine trocar and canula, but pure blood escaped, showing the absence of thrombosis. The trephine opening was then enlarged downwards and backwards by means of Hoffman's forceps, and the dura below the sinus exposed. An incision was made into the dura mater, and a trocar was thrust into the cerebellum; at the second insertion pus flowed freely. A larger trocar was introduced, and then a pair of sinus forceps; an india-rubber drainage tube was inserted, the dura was carefully laid over the surface of the brain without stitches, and the usual dressings applied. Rapid improvement and complete recovery, including the disappearance of optic neuritis, took place.

Mr. Dean deprecates the customary desistence from further operation after fruitless exploration of the temporo-sphenoidal lobe, and offers the method above detailed as permitting of investigation of the cerebrum (and ventricles), the lateral sinus, and the cerebellum, by one comparatively limited opening in the cranium.

Dundas Grant.

Sheppard, J. E. (Brooklyn).—*Head Injuries with Aural Complications.* "Arch. of Otolaryngology," 1892, No. 3.

THE first case was a man who, after a severe fall on the head, was unconscious for five days. He is stated to have had delirium tremens, followed by meningitis. He had giddiness and a roaring in the head, and his hearing power was somewhat dulled after the accident, but about six weeks afterwards it diminished, was lost in the right ear, and very rapidly, a little later, in the left. The watch was then not heard in either ear. In the right the tuning-fork was not heard by air-conduction, and very doubtfully by bone-conduction. In the left, air-conduction was better than bone, but voice was only heard at six inches. A diagnosis was made of labyrinthine concussion, rather than of fracture at the base of the skull.

The second was a boy who, after a fall, was unconscious for several hours, had hæmorrhage from the nose and mouth and from the left ear, no facial paralysis, and no marked dizziness. Hearing distance for conversation was diminished on the left side to three or four feet. The meatus was

partially occupied by a firm white body extending across it. Fracture of the base and a splinter of bone in the meatus were diagnosed.

The next is the case of a boy, deaf in the right ear since childhood. He was struck on the left side of the head above the ear, and was unconscious for several hours, then delirious for some hours more. There was some hæmorrhage from the ear, and great diminution of hearing power, but more for ærial than for osseous conduction. Suppuration followed. The diagnosis was rupture of the membrane, with subsequent suppurative otitis. Some improvement resulted after the removal of the ossicles of the left ear.

The subject of the fourth case was a man who, after a blow on the left side of the head, was unconscious for a short time, and lost blood by the left ear, nose, and mouth. He had left facial paralysis and great dizziness. The hearing power, normal in the right ear, was very much lowered in the left, in which bone-conduction was better than air-conduction, and the tuning-fork on the vertex was heard louder than by the right ear. The left meatus contained a quantity of *débris*, and there was a hæmorrhagic crust on the upper and anterior part of the meatus. There was probably fracture of the temporal bone, and a rupture in Shrapnell's membrane. The absence of paralysis of the uvula and soft indicated that the facial nerve was injured in the part of the Fallopiæ canal which crosses the inner wall of the tympanum.

He quotes Buck's division of fractures of the temporal bone into:— (1) "Fracture or diastasis of the tympanic or squamous portion, in the region of the middle ear, without implication of the pars petrosa." [Bone- better than air-conduction.] (2) "Fracture of both the tympanic and the petrous portions." He holds that fractures of the temporal bone need not necessarily cause death, or even loss of hearing, and insists on a thorough examination of the auditory meatus in all cases of suspected fracture of this part of the skull.

Dundas Grant.

Shield, Marmaduke (London).—*A Case of Sinus Thrombosis, attended with Remarkable Ocular Symptoms.* "Arch. of Otology," 1892, No. 3.

A MAN of thirty-five, with chronic otorrhœa of the right ear of long standing, was taken seriously ill with pains in the head, fever, and occasional rigors. The right eye-ball protruded more than the other. Complete right ptosis appeared, but improved, then left ptosis, which persisted, and also right facial paralysis. Both eyes protruded to an extraordinary degree, the lids were engorged, and their veins unduly prominent. The left pupil was greatly dilated, fixed, and not acting to light. Optic neuritis was present. A vein at the root of the nose was thrombosed and suppurated before death. The mastoid was unaffected, but there was swelling at the upper part of the jugular vein. The patient lived a fortnight, and the autopsy confirmed the diagnosis.

Dundas Grant.

ASSOCIATION MEETINGS.

AMERICAN MEDICAL ASSOCIATION, DETROIT, U.S.A.

June, 1892.

Section of LARYNGOLOGY and OTOTOLOGY.

CHARLES A. BURNETT, Philadelphia, *Chairman.*

A. B. THRASHER, Cincinnati, *Secretary.*

The Medical Treatment of Acute Tonsillitis and Pharyngitis; a comparative study, based on one hundred and sixty-nine cases. By Dr. JAMES E. NEWCOMB, New York.

Reference is had only to the catarrhal forms, and to quinsy. The cases are divided into three groups, as follows:—

1. Cases in which treatment was begun on the first or second day of the disease.
2. Cases where it was begun on the third day.
3. Cases where it was begun after the third day.

The standard by which the effect of remedies was judged was the number of hours in which the painful swallowing characteristic of the disease was relieved. Three remedies were used, salol, guaiac, and salicylate of soda.

The results of treatment may be summed up as follows:—

Salol cases—

- Group 1.—36 cases, average relief in 12 hours.
- Group 2.—15 cases, average relief in 14 hours.
- Group 3.—30 cases, average relief in 18 hours.

Guaiac cases—

- Group 1.—20 cases, average relief in 18 hours.
- Group 2.—10 cases, average relief in 23½ hours.
- Group 3.—14 cases, average relief in 11 hours.

Sodium salicylate cases—

- Group 1.—15 cases, average relief in 24 hours.
- Group 2.—12 cases, average relief in 17 hours.
- Group 3.—17 cases, average relief in 15 hours.

i.e., 81, or 48 per cent. healed by salol, averaged ... 14½ hours.
 44, or 26 per cent. healed by guaiac, averaged ... 17½ hours.
 44, or 46 per cent. healed by sod. salicylate, averaged 18½ hours.

The preference is therefore in favour of salol. The dose employed was five grains every two hours.

In regard to the rheumatic aspect of throat diseases, a study of these cases shows that 47, or 29 per cent., had either rheumatic fever, joint

pains, or rheumatic parents. One hundred and fifteen, or 71 per cent., were entirely free therefrom. The former were relieved by the remedies employed in an average of 16½ hours, while the average in the latter was 17½ hours, practically the same.

The writer believes that salol will relieve the conditions mentioned quicker than any other remedy, if there is much peritonsillar enlargement. He believes in an incision toward the median line, whether there is evidence of pus or not. It frequently gives great relief. Where pus is present free incision, followed by a hot bicarbonate of soda gargle, give satisfactory results. In all cases a thorough evacuation of the bowels should precede other remedies. This is particularly necessary with salol, which in the alkaline duodenum needs contact with the pancreatic juice to split up and set free its component parts. The urine in patients taking salol is generally darkened, but that need cause no alarm. No poisonous symptoms have been observed, and only occasional tinnitus.

Tuberculosis of the Pharynx. By Dr. J. E. BOYLAN, of Cincinnati.

The patient, a lady, married, twenty-five years of age, six months pregnant, had been sent to a southern climate because of a chronic catarrhal throat affection of two years' standing, and a more recent irritating cough. After six months' absence, believing her health entirely restored, she returned. During the ensuing six weeks there developed a very painful condition of the throat, which had grown rapidly worse, so that at the time of presentation she suffered intensely at every attempt to swallow. Her appetite until shortly before this had been good; she had no cough, did not sweat at night. The patient was fairly nourished; there was noticeable enlargement of the cervical glands. Physical examination showed a shorter and duller percussion note over the left apex than over the right, and a somewhat roughened expiration; beyond this nothing abnormal. Upon examining the pharynx, general pallor of the hard top was noticeable at a glance, which comprised the whole of the left side of the roof of the mouth, while on the right side it gradually merged into an abnormal redness, and then into a severe infiltration, which remained sharply defined from the pale right side at the median line, and which involved the uvula, the anterior and posterior pillars, the tonsil and the right side of the posterior pharyngeal wall. Upon the right anterior pillar there was an oblong shallow ulceration with irregular outline, and at the back of the tongue, near the right glosso-epiglottic fold, a similar one. In the neighbourhood of the first ulceration, and in various other parts of the field of infiltration, a number of yellowish white and greyish white specks were to be seen in places distinctly isolated, in others merging into indistinct whitish patches. Laryngoscopic examination showed the epiglottis and arytenoids somewhat anæmic; the larynx otherwise normal. Notwithstanding the inactivity of the disease in the lungs the patient's friends were informed that a rapid and fatal termination was to be expected. The condition was perceptibly improved at first by insufflations by iodoform and morphine, and very considerable relief afforded; the patient soon sank, however, into a condition of exhaustion, and succumbed to the disease ten days after giving

birth to her child, and within four months from the time that the disease first made itself felt in the pharynx.

A Case of Abductor Paralysis of both Vocal Cords. By JONATHAN WRIGHT, M.D.

The report of a case in which there was immobility of the left vocal cord in the median line, with inability of the right vocal cord to move more than one-eighth of an inch from its fellow. Attacks of dyspnoea occurred from time to time, in one of which the patient finally died, presumably from the failure of abduction on the part of the right vocal cords, which, with the permanent abduction of the left cord, closed the glottis.

The author does not pretend to say whether this phenomenon was due to a paralysis of the abductors primarily, or to laryngeal spasm from pressure (Krause's theory) of a cervical vertebra on the left vagus nerve, above the origin of the recurrent or upon the recurrent itself. There was curvature of the spine in the cervical region with convexity to the left. Experiments have proved that irritation of the vagus, or of the recurrent nerve, may not only cause a paralysis or spasm upon the side affected, but by reflex action through the medulla also of the opposite side.

The author quotes the experiments of Dionisio as shaking his belief in Krause's theory of spasm from the irritation of pressure.

He suggests the extirpation of the vocal cords in these cases of double posterior paralysis in order to avoid the continued use of a tracheotomy or intubation tube.

He suggests that, in the case of bilateral closure of the glottis lately reported by Ruault in the "*Arch. Internat. de Laryngologie*," No. 1, 1892, the operation of dividing one recurrent nerve, in order to cause cadaveric position of one vocal cord, was unsuccessful because contraction of the posticus muscles had taken place, with permanent contraction of the adductors, and probably fixation of the crico-arytenoid joint.

A Case of the so-called Bezold Variety of Mastoiditis. Opening of mastoid; craniotomy; death; autopsy; abscesses in temporal lobes and cerebellum; thrombo-phlebitis on the other side. Reported by Dr. H. KNAPP, New York.

A young woman had repeated attacks of coryza, with earache for a year. September 28, 1891—Acute otitis catarrhalis on both sides, recovery on the left, aggravations and remission on the right; mastoid tender, swelling of head of sterno-cleido-mastoid muscle incised, pus escaped; relief; meningitic irritation for two weeks; then chiselling away the outer table of the mastoid, pus from base to tip; relief four weeks; no discharge from mastoid—there never had been any from the ear. Cerebral symptoms marked, viz., persistent headache, nausea, occasional vomiting, dizziness, stupor, impediment of speech, loss of appetite, constipation; pulse varied from 72 to 88, later sank to 60; temperature, 98.4-10, 101, never higher, never rapidly changing; no deliria, chills, convulsions, or abnormality of sensation; no trouble from ear, upper part of drum-head bulging. In February, 1892, two months before her death,

sudden hard swelling at medial side of other left sterno-mastoid muscle. Optic neuritis developed a month before death. Left ear and mastoid healthy, hearing good; craniotomy advised, but refused until one day before death: operation—opening in mastoid enlarged and extended into the posterior fossa, three millimètres by two millimètres large; no pus; chiselling posterior wall of ear canal and enlarging mastoid antrum until probe passes freely into attic of tympanum; soft tissue felt; no caries, no pus; hole of two millimètres in diameter chiselled into middle cranial fossa; no pus between dura and bone; dura and superficial layers of bone incised, found healthy. Patient, who for the last half hour had to be sustained by subcutaneous injections of alcohol and artificial respiration, given up as hopeless; she rallied, however, breathed well, had good colour for three-quarters of an hour, then suddenly collapsed. Autopsy—A perforation in the medial wall of tip of mastoid one millimètre in diameter, verifying diagnosis of a Bezold mastoiditis; tympanic attic densely filled with granulation tissue, no pus; right lateral sinus filled with clotted blood; dura healthy; pia on temporal lobe and right side of cerebellum milky, small veins filled with pus; sinus around torcular, the left lateral sinus, and the left internal jugular, as far as the swelling observed during life filled with pus. Abscess in depth of temporal lobe, another in right hemisphere of cerebellum, both opposite the perforations made by the craniotomy; remainder of brain, in particular the ventricles, healthy. The case, with remarks on the significance of the subjective and objective symptoms of otitic brain disease, will appear in abstract in the *Journal of the American Medical Association*, and in full in the third number of the “*Archives of Otology*,” Vol. 1892.

Naso-Pharyngeal Lesions due to Lateral Vaso-Motor Causes. By RALPH W. SEISS, M.D., Philadelphia.

Considers nervous coryza, including some types of obstructive enlargement of the turbinated tissues, recurrent enlargement of the lateral pharyngeal walls, not dependent on inflammatory causes and various forms of pharyngeal and laryngeal varix. All the conditions are regarded as angio-neuroses, and believed to be due to a mal-condition of the vaso-motor centre in the medulla, or to truly cerebral causes. Nervous coryza may be due to mental causes, as anxiety, etc., and occurs in neurotic subjects with irritable hearts. Is associated with marked general vaso-motor neurosis, as tachycardia. Profuse perspiration, sensation of numbness, and cold extremities. Inspection shows intermittent distension of the venous sinuses, with but slight redness, or other inflammatory change.

Angio-neuroses of the pharynx may occur with rhinitis sympathetica, or of lingual varix, or may be found alone. An attack may come on suddenly, following overwork, or may become chronic. The local symptoms are fatigue and weakness, and constitutionally the evidences of low nerve and blood-vessel tone. On inspection vascular relaxation and varicose vessels are found. Varix of the lingual tissue is believed to be associated with grave central lesions in many cases. Local symptoms may include serious paroxysmal dyspnoea, and various forms of parathesia.

Three cases of typical angio-neuroses are reported, in which the treatment consisted largely of tonics and rest with gratifying results.

In addition to the typical neuroses central causes are believed to have an important bearing on many diseases of the naso-pharynx, the writer regarding the "catarrhal tendency" and "neurasthenia" as practically synonymous. The results of persistent vascular distension from central causes are increased, vulnerability of the area affected, hypertrophy of the tissues, and blood changes; the characteristic changes in chronic rhino-pharyngitis can therefore all be accounted for in cases of central origin. Treatment is discussed in some detail, and the immunity of the domestic animals from chronic rhino-laryngitis is believed to be due to the non-neurotic and well-controlled vaso-motor centres. The most useful therapeutic measures are climatic changes, rest, exercise, regulated bathing, massage and faradism. Strychnine, bromides, and digitalis are occasionally indicated. Local treatment is regarded as of value, and may act by transmitting favourable influences through the medulla, as is well known to be the case with irritants. Ill-timed operations and irritative treatment may in some way aggravate the central neurosis, as well as the local disease. A case of undoubted central origin is reported in which an amount of vascular tissue, equalling the little finger in bulk, was removed from the turbinated bodies owing to the rapid recurrence of swelling during a year's treatment. Benzoate of sodium, menthol, and the volatile oils of cinnamon and sassafras, thymol and camphor, are mentioned as of especial value when locally applied.

At present scientific treatment of naso-pharyngeal angio-neuroses would seem to include all measures recognized as general or local nerve tonics, and to seriously debar all irritants, depressants, and abnormal vaso-motor excitements.

Some observations upon Excision of the Membrana Tympani, and the Two Largest Auditory Ossicles. By Dr. C. H. BURNETT, Philadelphia.

1. The deafness, tinnitus and vertigo of chronic catarrhal otitis media, especially when adhesions exist between the membrana tympani and the promontory in the tympanic wall, or when there is evidence of synechiæ between the ossicles.

2. This operation is indicated in the suppuration, deafness, tinnitus, vertigo, headache and recurring earache of otitis media purulenta chronica.

Conclusions regarding the results of the operation in cases of chronic catarrhal otitis media were presented as follows :

1. The operation of excision is attended with no bad results even if it do no good, and its effects are superior to "massage," "mobilization," "plicotomy," etc., etc., applied to the membrane and the ossicles.

2. The most constant result of the operation is a relief from a sensation of pressure and fulness in the ear.

3. There is generally a more or less prompt, entire, and permanent relief of tinnitus and aural vertigo (so-called Ménière's symptoms).

4. The least frequent and permanent result is improvement in hearing. Sometimes, however, this is marked. In some instances the improvement in hearing is maintained after regeneration of the membrana tympani.

5. In those cases of chronic catarrh of the middle ear in which everything else has been tried without benefit, it would seem rational that the patient should have the chances of improvement offered by this harmless operation; for harmless it certainly has been in all his cases, even if the benefit has been only slight.

Conclusions regarding the results of the operation of excision of the membrana tympani and the two large ossicles in chronic purulent otitis media.

1. The operation has not failed either to greatly diminish or check the suppuration in all the cases of chronic otorrhoea in which the writer has applied it.

2. In attic cases with normal atrium, the sole perforation being in the membrana tympani, the operation has shown itself to be the only sure means of cure. He would add that in attic cases, with diseased atrium and with perforations in the membrana flaccida and membrana tensa, this operation has also effected a radical cure after the disease had defied for years all other remedies.

3. By this operation in chronic purulent otitis media, especially in cases in which the perforation in the membrana tensa is comparatively small, and while the disease is limited to the drum cavity, the suppuration can be directly reached and treated, and drainage improved by the removal of the membrana tympani and malleus, before the purulent disease has attacked the posterior portion of the drum cavities and the atrium. The mastoid inflammation and necrosis sinus thrombosis, pyæmia and cerebral abscess are prevented.

4. If any hearing exists before the operation in purulent cases, it invariably improves after the excision of the necrotic membrane and the ossicles.

5. Vertigo, headache, tinnitus, and the attacks of earache from gatherings, so common in chronic otorrhoea, are entirely and permanently removed. The general health, which is nearly always impaired in these cases by a form of mild chronic septicæmia, from the chronic purulency in the ear, is always improved by the antiseptic effects of the operation, which removes the septic nidus, and makes it possible to render the drum-cavity entirely aseptic by the improved drainage and direct medication.

Dr. Burnett has seen no reason for changing any of these conclusions; on the contrary, he is more firmly convinced of the great benefits, especially in chronic purulent cases, to be derived from the operation of excision of the necrotic membrane, and the diseased malleus and incus. The latter outlet, however, is readily destroyed by purulency in drum-cavity, and hence in chronic cases is rarely found when the operation is performed.

Synopsis of article on Excision of the Membrana Tympani and the two Larger Auditory Ossicles, as a Means of Treatment in Chronic Catarrh of the Middle Ear and in Chronic Purulent Otorrhoea. By DR. CHARLES H. BURNETT.

Indications—

1. Deafness, tinnitus, and vertigo occurring in otitis media catarrhalis chronica,

2. Suppuration, deafness, tinnitus, vertigo, and other sequelæ of otitis media purulenta chronica.

Rationale—

1. Permanent perforations may improve the hearing. Removal of the malleus and incus unloads the stapes and relieves tinnitus and vertigo.

2. In otitis media purulenta chronica exsection of necrotic tissue improves drainage, facilitates treatment of diseased tympanic cavity and stops suppuration, and prevents its serious sequelæ when unchecked. The removal of mechanical obstructions, and checking of suppuration unloads the stapes, improves the hearing, and stops the tinnitus and vertigo.

Dr. Burnett next considered the organization and technique of the operation. He performs it with the patient under ether, and he employs electric light, using for this purpose a six volt three candle power incandescent lamp, held on the forehead by a head band, and near by a portable six volt storage battery. (Weight 11 lbs. 6 oz.)

Conclusions—

In the otitis catarrhalis chronica.

1. This operation is attended with no bad results even when it does no good.

2. The most constant result of the operation is a relief of a sense of fulness or pressure in the ear.

3. The next most constant result is the prompt, and the permanent removal of tinnitus aurium and aural vertigo (so-called Ménière's disease).

4. The least frequent result is improvement in hearing—sometimes, however, this is marked and permanent.

In otitis media purulenta chronica.

1. This operation has not failed to stop suppuration in all the cases of chronic purulent otitis media in which the writer has applied it.

2. In "attic" cases, with normal atrium, the sole perforation being in the membrana flaccida, this operation is the only means of cure.

3. By this operation, in cases of chronic purulent otitis media, in which the sole perforation is in the membrana tensa, and is comparatively small, and while the purulency is limited to the anterior part of the drum-cavity, the suppuration is checked before it attacks the posterior portion of the drum-cavity, and mastoid inflammation and necrosis, sinus thrombosis and cerebral abscess are thus prevented.

4. If any hearing exists before the operation, it invariably improves after the operation.

5. Vertigo, headache, tinnitus, and the ordinary attacks of acute inflammations, or "gatherings," so common in chronic otorrhœa, are entirely removed by the operation of excision of the necrotic remnants of the membrana tympani, malleus and incus.

Report of four hundred cases of Intubation of the Larynx. By
Dr. F. E. WAXHAM.

Under 1 year	—12 cases with	4 recoveries, or	33 $\frac{1}{3}$	per cent.
At 1 year	—52	„ 12	„ 23.07	„
At 2 years	—70	„ 18	„ 26.71	„
At 3 years	—69	„ 27	„ 39.10	„
At 4 years	—79	„ 30	„ 37.97	„
At 5 years	—39	„ 18	„ 46.15	„
At 6 years	—25	„ 7	„ 28	„
At 7 years	—25	„ 10	„ 40	„
At 8 years	—10	„ 6	„ 60	„
At 9 years	— 6	„ 3	„ 50	„
At 10 years	— 5	„ 2	„ 40	„
At 11 years	— 1	„ 1	„ 100	„
At 12 years	— 2	„ 0		
At 13 years	— 1	„ 0		
At 14 years	— 1	„ 0		
At 20 years	— 1	„ 0		
At 43 years	— 1	„ 1	„ 100	„
At 60 years	— 1	„ 0		
	<hr/> 400	<hr/> 139	<hr/> 34.75	„

A case of Papilloma of the Larynx: an intubation tube worn four years. By Dr. WAXHAM.

The case is unique on account of the complications, the length of time the tube was worn, and the almost perfect comfort of the patient. The patient suffered from an attack of measles at the age of one and a half years, during which time the cough was croupy, and respiration somewhat embarrassed, but these symptoms soon subsided. Six months later the voice became husky, and finally suppressed entirely. The respiration was difficult for two months, and the dyspnoea gradually increasing. The patient was seen by several physicians, including the late H. A. Johnson, who diagnosed laryngeal obstruction, due to papilloma. The symptoms gradually increased until the child was two and a half years old, when they were so alarming as to threaten immediate suffocation. Intubation of the larynx was performed, in the hope that the introduction of the tube and subsequent pressure might destroy the growth. The operation gave immediate relief, and the tube was worn one week without any inconvenience. The tube was then removed, and not replaced for two weeks, when the symptoms again became urgent, and it was reintroduced. In a few days it was again removed, but the patient could not breathe without it, and it became necessary to at once replace it. It was evident that the simple pressure of the tube was not sufficient to destroy the growth. Discolouration of the upper and anterior portion of the tube indicated the location of the growth. It was decided to destroy the papilloma by cauterization. This was done by first coating the upper and anterior portion of the tube with collodion; then chromic acid was applied, and then another coating of collodion: the tube thus prepared

was introduced, and left in position for a few days. Upon its removal, as the respiration was very difficult, another application was made in a like manner. On account of an absence of several months in Europe, the patient was left in care of another physician, who performed tracheotomy on account of the difficulty experienced in removing the tube. On returning to the patient several months later, he was found wearing a tracheotomy tube instead of the intubation tube, and the larynx firmly sealed by adhesions resulting from the cauterization. The finest probe could not be passed through the larynx. Laryngotomy was performed, the adhesions broken up and cut away as far as possible, and the remnants of the papilloma removed; the cartilages of the larynx were united by means of silver wire sutures, and a small intubation tube left in the larynx to prevent adhesions, the tracheotomy tube being allowed to remain undisturbed. After the wound had healed, the small intubation tube was removed, and a larger one, shortened so as to be worn above the tracheotomy tube, introduced. The patient, strangely enough, could not breathe through the larynx with the tracheotomy wound closed, either with or without intubation tubes. There was a constant tendency to the return of the growth above the head of the intubation tube, which was as frequently removed by means of a curette. Larger and larger intubation tubes were used, until, at the end of two years, the patient was able to dispense with the tracheotomy tube. For two years the patient has been wearing the intubation tube alone. It has been necessary to change the intubation tube on an average of once a month, and to occasionally alter the shape of the head, so as to bring the pressure at different points. The patient is now able to breathe without the tube for several hours at a time, and presents every appearance of health.

Mental Aberration attending Hypertrophic Rhinitis with Subacute Otitis Media. By Dr. J. G. CARPENTER, Stanford, Kentucky.

Mr. H., age about forty years, farmer, family history good, general health excellent, excepting the affection in upper air passages. Though he has been a hard worker and able to transact business, his health the last year or two has been greatly impaired; he felt languid, indifferent, tired, that he is losing interest in business, has nasal stenosis, mouth breather, and has an oppressed full sensation in the naso-orbital regions, constant headache, greatly aggravated by colds, sudden changes in weather, and hot sun, dislikes to be in company, seeks solitude, is melancholic, irritable, peevish, morose, has an indifferent, stolid, and insane expression, has constant pains in various regions of body, at times increased in severity. In the spring of 1891 his symptoms for work were increasing; he sought no professional advice, but tried to work or wear off his indisposition. He went to the field to plough, had a violent headache, stopped ploughing for a while and lay down on the ground. From this time has no recollection of what transpired; for days he failed to come home; left horse in the plough. Family and neighbours instituted a search, but Mr. H. could not be found. A nephew was in the city of Lexington, Kentucky, and saw Mr. H. in the street in his shirt sleeves and old working clothes. Mr. H. could give no account of himself, did

not know where he was, or when or how he came to that city, nor on what business. Said he had a bad headache and lay down in the field, and was aimlessly wandering over the city, speaking to no one and like the wandering Jew finding no rest, but continually passing on, virtually was lost to himself and family and friends and surroundings. His nephew brought him home. He does not sleep well, appetite capricious, is very weak, nervous; says his head (forehead) and left half of head hurts terribly bad, that the left half of head throbs all the time. A rhinoscopic examination reveals a naso-pharyngitis, hypertrophy of the lower and middle turbinated bodies, nasal stenosis, the post naso and vault of pharynx is of a purplish red and swollen, angry appearance, coated with thick tenacious inspissated mucus, great tumefaction. The left side of head is sensitive to touch. The drum-head is bulging and highly congested. Paracentesis is resorted to; the throbbing, pain, and sensitiveness rapidly subside. The naso-pharyngeal chambers are sprayed and cleansed with a mild antiseptic wash, and daily medicated for a week with mild, soothing, astringent, non-irritant remedies.

The congestion and inflammation reduced to a minimum. Now the turbinates are cocained and cauterized, and the nasal stenosis relieved in seventy-two hours; from latter treatment the mental faculties begin to clear up, the clouds gradually pass away, patient is sprayed for three weeks with mild astringent, antiseptic and aseptic soothing remedies, and in a month is cured of all mental aberration. The nasal stenosis and enlarged turbinates have been removed, and the lining of the naso-pharyngeal chambers placed in a healthy state; patient is restored to former health.

Infectious Pseudo-membranous Follicular Tonsillitis and Pharyngitis.
By Dr. CASSELBERRY, Chicago.

The fact that in tonsillar affections diphtheria can only be excluded positively by the absence of the Klebs-Loeffler bacillus should not engender neglect of macroscopic signs and clinical symptoms, upon which a differential diagnosis may also be made, usually with greater promptness and with reasonable certainty.

Furthermore, concerning the various forms of follicular tonsillitis and pharyngitis, in the absence of more definite bacteriological results we must still rely upon the clinical aspect to distinguish one kind from another.

One can certainly distinguish at least two types of acute follicular tonsillitis which may be named in contradistinction to each other.

1. Simple follicular tonsillitis, and (2) infectious pseudo-membranous tonsillitis.

With the simple form there may or may not have been previous chronic hypertrophy or inflammation; it is conditional, if not caused by taking cold, *i.e.*, by refrigeration of some part of the body surface, which determines vascular engorgement of the tonsils, exactly as with another individual it may occasion vascular engorgement of the nasal turbinated bodies. The tonsil swells, the follicular openings are obliterated and the pent up secretion acts as a further irritant; it becomes inspissated, and mixed with epithelial debris; it is soon forced out to the surface of the gland in the

form of cheesy pellets which may simulate a punctated pseudo-membranous exudate, but which is really not such ; it is without evidence of primary parasitic infection as a cause, and it is not, therefore, contagious, but it is capable of being transposed into a conglomerate variety of tonsillitis by secondary infection with pathogenic micro-organisms. It is not usually preceded by a distinct chill, and it is not accompanied by much fever or systemic depression, and, finally, when the tonsils are free of this accumulated *débris*, or at times earlier if the globules are forcibly dislodged and removed, this simple tonsillitis rapidly subsides.

2. Infectious pseudo-membranous tonsillitis, on the other hand, is characterized by deep congestion, but often only by moderate swelling of the tonsil, and by a punctated exudate of pseudo-membrane the spots of which are in size from two to four millimètres in diameter and are attached around the follicular openings, presenting the appearance as if the crypts within were also lined with the same material. Unlike the "cheese" pellet, the exudate is thin and translucent, and so intimately connected to the underlying mucosa that it cannot be detached without bleeding or without force. Two or more puncta may join at their borders and form larger spots, but after cleaning away all muco-purulent matter this punctated conformation of even the larger pseudo-membranous areas may readily be discerned. In addition to the tonsils any or all of the muco-lymphoid glands in the pharynx may be likewise affected, especially the chain of glands located just behind the tonsil and separated from it by the posterior pillar, but the pseudo-membranous exudate is limited absolutely to the glandular structures of the pharynx, although careful cleansing and critical inspection will be required to demonstrate this fact. It is often ushered in by a chill and is accompanied by moderate or even high fever. The cause is infection by any one of several species of pathogenic micro-organisms, *e.g.*, streptococcus crysipelatosus, staphylococcus pyogenes, etc.

The Klebs-Loeffler bacillus of true diphtheria is not found in this disease, as reported by Sendtner, Barnabee, Dubler, Rendee and Hajek, each of whom, however, has found in abundance some one of the other microbes above mentioned.

A case is related embodying distinctively the foregoing data. By attention to these details it is, moreover, believed that this form of tonsillitis and pharyngitis, with but very few exceptions, may be readily distinguished clinically from the true diphtheria, which is characterized, not by the thin, translucent, punctated exudate, but by thickish, opaque, diffuse plaques of pseudo-membrane, which are not limited to the glandular structures, but which when originating on the tonsil rapidly embrace as well the pillar of the fauces and extend to or involve the pharyngeal wall and velum palati.

Mastoid Trephining, with thirty-two cases operated on among some 3400 new ear patients of 1889 to 1891. By Dr. RANDALL, Philadelphia.

The author called attention to the growing tendency to operative treatment in otology as in other fields of practice, and to the increased necessity for intervention, especially for mastoid empyema or caries,

since the epidemics of influenza. Even those disinclined to intervene thus are likely to find, as he had done, that the need was increasingly forced upon them. Among some 3400 new patients for this last triennium of work, there had been upwards of one hundred mastoid inflammations; and while many were brought to resolution, there were thirty-two operations upon the bone, as well as others where operation was refused, or could be carried out from within the canal. Pus was present in every one of these cases, and in only one was the exterior of the mastoid intact. This last was one of the two cases which terminated fatally, and the only one in which the operation could have contributed to the fatal issue.

He concludes that operation is not always necessary, unless pus is present; that pus should always be evacuated; and it should be sought within the bone in all suspicious cases. Ether is generally needed in order to permit of thorough exploration, as it is impossible to determine in advance the exact condition to be found.

All diseased tissue possible should be removed at once, and the minimum of dressing or irrigation left for the after-treatment.

Hypertrophy of the Anterior Extremity of the Middle Turbinate Body of the Nose. By Dr. G. V. WOOLEN, Indianapolis, Indiana.

This condition the author finds exceedingly common. Not the "necrosing ethmoiditis" of Woakes, but simply an overgrowth of tissue at the anterior tip. This, from not greatly obstructing the breathing canal, often passes unnoticed.

But by catching the nasal nerve between itself and the septum, which it must do unless the space in that part of the nose be unusually large, the hypertrophied tip produces pressure irritation, and by occluding the orifice of the ethmoidal and frontal sinuses defective drainage, the two prominent evils of catarrh in this and other regions as claimed by Lefferts. The pressure irritation of the nasal nerve is reflected back over the other branches of the fifth, and together with the defective drainage causes headache, unilateral or bilateral, as the pressure is on one or both sides, deep orbital pain, mental hebetude with defective memory, melancholia, and even epilepsy.

As these neuralgias of the fifth nerve are not common in children before the turbinates have become much hypertrophic, and as shrinking with a dry atmosphere or cocaine brings temporary, and their removal permanent relief, the conclusion is that the turbinate tip is the cause of the trouble. The removal of it is easily effected by the snare.

An Improved Galvano-Cautery Snare; its Use in the Nose and Throat. By Dr. HANAU W. LOEB, St. Louis, Mo.

After commenting upon the necessity of great improvement in the galvano-cautery snares now in vogue, and after stating the shortcomings of such instruments, the writer presented his own snare as one which could be kept clean under all circumstances.

In this instrument the insulating material is rubber, which can be easily removed from the canule, while in the older instruments a covering of thread or silk which, once soiled, is always unclean, constitutes the

insulation. The canulæ themselves are also easily removable, and hence are just as readily cleansed.

To obviate the great length of platinum wire which all other snares necessitate, the writer has added a little device, which consists in passing two stout copper wires through the canulæ. Each wire contains a little eyelet in its flattened end, through which the platinum wire is inserted, and the ends bent so that when the wire is pulled into the canulæ it cannot escape. There is less inconvenience in threading the little eyelet than in passing the wire through the old canulæ. An ivory tip, similar to those already in use, completes the instrument.

The snare is applicable to the slide handle made by the McIntosh Battery and Optical Co., from whom as well as from A. S. Aloe and Co., St. Louis, Mo., the snare may be procured.

The following are the advantages of the instrument—

1. Cleanliness. Every portion is removable, the rubber insulator, the two canulæ, the two copper wires, the platinum wire, and the ivory tip; it is therefore easy to treat them as is ordinarily done with all surgical instruments.

2. Less expense. The platinum wire is not so frequently broken, and when it is, it may be replaced at a trifling cost.

3. The instrument is firmer, and therefore more easy of manipulation.

4. The current required is undoubtedly less.

5. There is no danger of short-circuiting the current.

As to the range of application of his snare, Dr. Loeb stated that in the removal of tonsils it was specially of service. Tonsils in all conditions of hypertrophy, except when thoroughly impacted between the pillars of the palate (even then a small portion may be removed), are excised with more precision and with less danger or inconvenience than by any other method, while pain and the time required are not increased. The tonsil is drawn out from between the palatal pillars by means of forceps, and the snare is engaged so that as much of the tonsil is removed as is desired or desirable. Ear-pain and inflammatory reactions are no greater than after the tonsillotomy operation.

To remove the uvula the snare is pleasing. The uvula is allowed to drop into the loop, the wire drawn tight, the current turned on, and the uvula removed, no forceps being necessary. Less pain follows this operation than that with the scissors or uvulotome, apparently because the forceps or forks of the uvulotome draw down the mucous membrane, so that more of the mucous membrane is cut away than of the muscular tissue, whereby a considerable portion of the latter remains exposed, making an exquisitely painful stump.

In the nose the snare is indicated wherever the old forms could be used, for the removal of polypi, portions of mucous membrane, and of the turbinated bones.

The writer also stated that he had his cautery points covered with rubber instead of with thread, by which is overcome the objectionable lack of cleanliness.

The article concluded by the observation, *Quod erat demonstrandum*, his comment upon the following communication received from the McIntosh Battery and Optical Company:—

"The snare is certainly possessed of advantages over the ordinary forms, notably among which are greater ease with which it can be cleaned, economy in platinum wire, and less ampérage required in heating. This latter feature showed very plainly when testing yesterday and to day a new device for the use of the Edison current in galvano-cautery. Twenty ampères of current could not satisfactorily heat the ordinary form of snare; ten to fifteen brought your snare to the proper heat."

Diseases of the Naso-Pharyngeal Portion of the Respiratory Tract. Their Relation to, and Ulterior Effects upon the General Health. By Dr. P. C. JENSON, Manistee, Mich.

It is an experience of most frequent occurrence to observe the effects of sudden changes of temperature upon the human organism. Fluctuations of temperature and humidity, with their concomitant barometric variations, are factors which cause an inequality of the circulation, and thus the naso-pharyngeal portion of the respiratory tract suffers from blood stasis, induced by this irregular circulation, which constitutes the first step in taking cold. The sudden alteration of heat and cold, and the transition from dry to a humid atmosphere, are very influential in the production of colds. Of other important etiological conditions may be mentioned debilitating influences, excitement, previous and present disease, heredity, temperament, occupation, also mechanical influences, chemical influence, mental emotions, defective sanitation, imperfect digestion, etc.

He is disposed to believe that chronic affections are the result of repeated colds or attacks of acute inflammation, and that they in turn predispose to the acute troubles. In the majority of cases the result is an acute inflammation of the mucous membrane which lines the nasal passage. In others it gives rise to pharyngitis and tonsillitis, and other forms of disease.

Persons whose business necessitates the endurance of alternate hot and cold, or the exposure to dust and irritating gases, are rendered especially susceptible to rhinitis and naso-pharyngitis.

The frequent association of such nasal diseases suggests causal relation. Intra-nasal diseases are frequently the cause of a series of secondary affections. These secondary diseases may occur from direct irritation, or from reflex action. From the former cause may be mentioned Eustachian catarrh, otitis media, pharyngitis, tonsillitis, laryngitis, bronchitis, etc.; while to the latter may be attributed the so-called sensory motor, as nasal or bronchitic asthma, sneezing, hay fever, epiphora, etc. The symptomatology of intra-nasal disease will depend upon the form of disease present. As in polypus, we have the symptoms of obstruction, as interference of nasal respiration, frontal headache, intra-nasal pressure, snoring, pharyngeal and laryngeal irritation. The direction in which the secondary disease may extend will be largely

dependent upon conditions, such as inheritance, dyscrasia, peculiarities, predisposition, temperament, occupation, etc. Repeated attacks of colds, extending over a period of years, will in most individuals establish a condition commonly known as catarrh. The excessive formation of mucus gravitating and trickling down from the post-nasal space into the pharynx, there to be swallowed along with food and drink, will soon cause pathological fermentation of the gastric contents, this finally causing a chronic gastritis and developing intestinal disorders. And not only will the system in general suffer the effects of inanition, but additional depression and exhaustion is superinduced by contamination of the blood with mucoid poison. Leucomaines, pepto-toxines, and the products of bacterial and pathological action, the consequence of these morbid derangements, may eventuate in any of the following conditions, viz. :—anæmia, chlorosis, leucocythæmia, copræmia, neurasthenia, neuralgia, rheumatism, abscesses, furuncles, carbuncles, eczema, etc.; and if a latent strumous or tuberculous habit exists, it may be speedily aroused into energetic morbid action.

Of the effects which further exhaust the system and complicate pre-existing conditions, obstructive nasal abnormalities are seriously instrumental in the development of inflammation of the mucous membrane of the larynx, tracheal and bronchial tubes by reason of failure in elevating the temperature of the inspiratory current of air to that of the blood, and further by insufficiently moistening the ingoing current, and improperly sifting and freeing it from mechanical irritant, so that in the complete or partial obstruction where buccal respiration is compulsory the air reaches the deeper passages and too low a temperature, and is in too dry a condition; hence intra-nasal disease stands in causal relation not only to secondary diseases of the intestinal tract, but also contributes to the development of laryngeal, tracheal and bronchial inflammations. Obstructive nose diseases are also influential in the causation of various neuroses, such as asthma, paroxysmal sneezing, hay fever, and cholera; while catarrhal and general fevers are not infrequently produced from the same cause.

Abstract of Observations of Twenty-five Cases of Ear Disease, occurring as Sequelæ to Epidemic Influenza, in San Francisco, between 1889-1892. By M. C. O'TOOLE, San Francisco.

Epidemic influenza has prevailed in San Francisco, and throughout the State of California generally, since the winter of 1889-90. Observations of twenty-five cases of ear disease, occurring as sequelæ to this epidemic, may be of interest.

Number of cases—25.

Primary, having had no previous ear or throat trouble	...	16
Had chronic pharyngeal catarrh	... ..	4
Adenoid vegetations in naso-pharynx...	... ..	2
Pulmonary tuberculosis...	... ..	2
Chronic purulent suppurations of middle ear	... ..	1

In ten of these primary cases, and in all the others, the ear symptoms set in as acute purulent inflammation. Six commenced as acute catarrhal otitis media; of these four passed into the purulent form within the first twenty-four hours of the attack.

In both cases having adenoid vegetations in the naso-pharynx (boys, nine and twelve) the ear disease set in as acute suppuration. The general symptoms were treated energetically from the first, but without material benefit until the vegetations were removed. The cessation of ear complications on the removal of these obstructions would imply that the inflammatory action originated in these bodies.

A woman, aged thirty-eight, who had chronic suppuration of the middle ear with perforation of the membrane for eight years, died of meningitis on the tenth day of the attack of grippe. She lost consciousness on the fourth day. *Post-mortem* examination showed purulent infiltration of the sub-arachnoid lymph spaces, with marked congestion of the vessels of the pia mater.

Both cases of tuberculosis were under observation for laryngeal complications previous to the attack.

All the symptoms were aggravated by the presence of this disease, the laryngeal structures becoming suddenly œdematous and ulcerated. Both cases succumbed to a diffused broncho-pneumonia. Suppuration and disintegration of tissues proceeded rapidly, in apparent defiance of all treatment.

The characteristic distinctions observed in aural manifestations occurring as sequelæ to epidemic influenza, as compared with similar forms of ear disease free from this complication, may be stated as follows:—

First—Suddenness and intensity of attack.

Second—Vomiting, as one of the earliest symptoms, often accompanied by vertigo and sensations of rotation around a vertical axis.

Third—Marked tendency to cell proliferation, with serous infiltrations, notably between the layers of the membrana tympani and in the faucial orifice of tube.

Fourth—Intractability to treatment.

Fifth—Tendency to recur after apparent recovery.

Sixth—Tinnitus aurium, aural vertigo, and impaired hearing were observed (intermittingly in two cases) after the objective symptoms had subsided. When percussion over the region of the mastoid caused pain, hyperæmia of the middle ear was suspected. Here inflation seemed to increase the deafness, but all the symptoms (notably the vertigo) were improved by leeching, hot applications, etc.

The formation of an exudation beneath the dermoid layer of the membrane is believed to have prevented spontaneous rupture; such having occurred in one case only.

Bullea or blebs upon a bulging, injected membrane were observed in four ears; these were caused by the deposit of a blood-stained infiltration beneath the dermoid layer; in one case this layer was completely detached. (He forwarded the specimen.) The bulging of the membrane—a condition frequently observed—was caused by a copious serous infiltration into the drum cavity. In recent cases this condition was

relieved by suction with Siegel's apparatus, after paracentesis. In three instances, when treatment was neglected for a week and over, the deposit became thickened, and could not be removed in this manner.

During the first winter of the epidemic, two cases came under observation which suggested impairment of the function of the auditory nerve; both subjects were advanced in years, and in both deafness came on suddenly and was almost absolute, with loss of equilibrium and other symptoms, pointing to involvement of the labyrinth, the tuning-fork being heard but faintly when the meatus was stopped. In each case there had been delirium and hallucinations during the earlier part of the attack; neither had previously shown neurotic tendencies. Hearing was most impaired when mental depression and physical debility were greatest, but improved with returning vigour. Temporary impairment of the function of the auditory nerve was probably owing to the general neurasthenia, aided by pressure upon the cochlea through hyperæmia of the tympanic cavity.

The removal of impacted exudation or granular particles from the faucial orifice of the tube is facilitated by using a catheter which for some time past has served for the removal of fragments of adenoid vegetations. When in position the bulb at distal end is moved backwards and forwards. The particles, being detached, are drawn into the catheter by suction.

Spontaneous Cure of Multiple Papillomata of the Larynx after Tracheotomy. By Dr. JOSEPH A. WHITE, Richmond, Va.

Dr. White reported a case of cure of recurring papillomata of the larynx, after tracheotomy, in a boy eleven years old, who was operated on in June, 1887. He had previously removed the growth *per vias naturales* several times with a more pronounced recurrence each time. An attack of suffocation, which brought the child to death's door, necessitated the tracheotomy. Any subsequent attempt to remove the growth resulted in increasing the neoplasm. When all operative efforts ceased they began to disappear spontaneously, and the case is now well. The tube has been worn five years. The voice is perfect and health good. An interesting point of the case was the development of a well-marked isolated papilloma on the under side of the epiglottis. The case also developed tracheal papillomata after the operation, which has delayed the removal of the tube. Dr. White was advised, but declined, to perform thyrotomy, because of the prospective injury to the voice.

It is the sixth case in laryngological literature of spontaneous cure of these growths after tracheotomy, the others being reported as follows:—Two by Prof. Oertel, quoted by Hoppman; one by G. Hunter Mackenzie; one by Eliasberg, which closely resembled the author's case; and one by Garel.

It is also the only case of papilloma of the epiglottis, except the one reported by Uehermann.

Dr. White argued that tracheotomy was preferable to thyrotomy, because it was equally free from danger to life, and did not injure the voice. He also made some remarks on the causation of laryngeal papillomata in children, and called attention to their connection with adenoids of the naso-pharynx.

Peroxide of Hydrogen and its use in Ear Diseases. By Dr. WALTER B. JOHNSON.

The peroxide of hydrogen, fifteen volume solution, is the strongest solution necessary for medical purposes. It should be reliable and fresh, when it is harmless for internal and external use.

The chemical action takes place immediately upon its application to diseased tissues; nascent oxygen and water is the result. The nascent oxygen is the valuable constituent which destroys germs—pus, and the products of fermentation. It is rapidly converted into oxygen during the reaction, the froth which results from the chemical action is a protective for the exposed tissues. It is said to be the most active germ destroyer, being one and a half times stronger than bichloride of mercury.

The peroxide solution has many advantages over any of the other germicides for cleaning deep cavities:—

Its susceptibility to use in any quantity without danger of toxic effect.

The certainty that the pathogenic bacteria of any species are totally and rapidly destroyed. The ability not only to destroy the products of decomposition and fermentation, but by the quality of effervescence during decomposition to carry forward and without the wound all such products which it would be difficult to reach with ordinary solutions by syringing or injection.

Any remedy may be used in the treatment of the disease subsequently to the application of the solution, the effect of the application itself being simply to render the parts perfectly aseptic, and place them in a favourable condition to assist Nature's reproductive process.

It may be used to advantage in catarrhal otitis, also in suppurative otitis, and in mastoiditis after the incision has been made. It is to be applied to the diseased tissues frequently three times each day, and does not counteract or interfere in any way with the use of any other desired remedies.

Its action on carious or necrotic bone is unique; it causes its disintegration and removal, and has nothing but a beneficial effect on the living bone substance.

The result of this line of treatment, which has been followed in a considerable number of mastoid cases, has indicated the possibility of a degree of conservatism in the treatment of mastoid disease which is very desirable.

All the cases treated have done well, no deaths have occurred, and in no case was it considered necessary to scrape the bone or to remove any portion of it, while the period of time necessary for the wound to assume a sufficiently healthy condition to render it advisable to permit it to close did not seem longer than the time which must ordinarily elapse after the operation for thoroughly scraping the mastoid, and was much shorter than the time required before the wound produced in chiselling the mastoid could possibly be allowed to close.

The Physiology and Pathology of the Tonsils. By Dr. JOHN NORTH.

The conclusions of the paper were as follows:—

That the faucial tonsil is a collection of from twelve to sixteen separate

and distinct simple and compound follicles and capsules that are found between the anterior and posterior pillars of the fauces.

That simple and compound follicles, with their capsules, are found in all mucous membrane.

That the mucous follicles are not distinct glands, but are simply a folding or depression in the mucous membrane, for the purpose of increasing the surface of the membrane.

That the epithelial cells lining these follicles are the glands proper that secrete the mucus.

That the epithelial cells lining the follicles do not differ from the epithelial cells upon the smooth surface of the mucous membrane in the same locality.

That the crypts of the tonsils are simply the opening into the follicles, where the mucous membrane reduplicates itself.

That in the healthy condition the space between the anterior and posterior pillars is an inverted trough.

That the tonsil in health does not protrude beyond the surface of the membrane.

That where the tonsil protrudes beyond the surface, it is in an abnormal condition.

That the principal function of the epithelial cell is to secrete mucus to moisten and lubricate mucous membrane.

That mucus accumulates in the follicles of the membrane, to be used when occasion demands.

That there is no proof that the tonsil is a blood-elaborating organ.

That children with enlarged and diseased tonsils are not as well nourished, nor as well developed and healthy, as children with sound tonsils.

That there is not sufficient evidence that the tonsils are "leucocyte manufactories."

That the leucocytes do not reside on the tonsils any more abundantly than in other parts of the body.

That enlarged tonsils have the power of absorbing septic poisons, and furnish a good media for their development.

That the tonsil is not a gland, but is an aggregation of mucous follicles, with as many openings as there are follicles.

That with our modern methods of cooking and preparing foods, there is no well-recognized use for the tonsil.

That diseases of the tonsils are generally the result of micro-organisms, or an underlying dyscrasia or constitutional taint of the system.

That in health the follicles contain mucous and exfoliated epithelial cells, and that cultures of the contents are negative.

That in enlarged and diseased tonsils the contents of the follicles are filled with pathological products, the result of retrograde metamorphosis and fatty degenerations. Cultures made from their contents show the presence of micro-organisms.

That impure air will not cause tonsillitis if the follicles are in a healthy condition, and when there is absent germs.

That pathogenic germs are not so apt to develop if the follicles are in a healthy condition.

That the condition of general enlargement of lymphoid tissue called "lymphoidism" depends upon the constitutional condition in the majority of cases, and requires constitutional as well as local treatment.

That tonsillitis and other inflammatory diseases of the tonsils are not always of rheumatic origin.

That the anti-rheumatic remedies which relieve this class of troubles do so on account of their anti-germ properties.

That inflammation of the tonsils may take place in the follicles or in the adenoid tissue.

That in the partial destruction of the follicles we very often have inflammation taking place, on account of the closing of the orifices of the remaining portion of the follicles.

That true hypertrophy of the tonsil seldom if ever takes place.

That we often have hyperplasia of the tonsils.

That enlarged tonsils are usually a combination of hypertrophy and hyperplasia.

That every enlarged tonsil is a pathological product, and that it is a tumour.

The Operation for Excision of the Ossicula in Chronic Aural Catarrh, with Instance of a Failure. By Dr. H. V. WURDEMANN, Milwaukee.

The author disclaims any intention of maligning surgical procedures in aural disease, as he is convinced of their utility by his own experience. No cases hitherto have come to his knowledge in which the hearing had been made worse by excision of the larger ossicle in these cases.

The patient was a strong, healthy man of sixty, who complained of increasing deafness, tinnitus, and vertigo. He claimed right ear to have discharged many years ago, and since that time had been "totally" deaf on that side. The left ear had been failing for about five years, and conversation was now carried on with difficulty. The patient could hear tuning-fork of low pitch, and the bone conduction was relatively better on the right or deafer side; loud sounds also heard. On the left side he could hear the watch by pressure, whisper two centimètres, and voice one and a half millimètres. Drumheads retracted and opaque with chalky deposit in membrane. Eustachian tubes of both sides patulous. Has hypertrophic rhinitis and deviated septum.

The nasal trouble was greatly benefited, but after four weeks' treatment by vapours and injections, through the catheter, he was no better as to the tinnitus or hearing. The probable benefits of the operation of excision were held out to the patient, and the operation performed under ether. The malleus and membrane were extracted without difficulty, and although several attempts were made to bring the incus into view by the incus hook, no reckless gouging was done. The patient did not take the anæsthetic well, and became cyanotic at times, delaying the progress of the operation. On the next day he was found to be *totally deaf on the operated side*, and complained of great dizziness. The latter was ascribed to the after effects of the ether. A few days later suppuration set in, which stopped in two weeks. The after-treatment for the first few days

consisted "in letting bad enough alone," and afterwards in gentle removal of the discharge by a pledget and boric acid solution.

In spite of subsequent treatment by pilocarpin, mercurials, electricity, and local treatment through the catheter, the patient has continued practically stone deaf to the time of writing, one year to the date of the operation. Treatment was continued on the other side with beneficial results, to the gratification of all parties concerned. Massage of the drumhead and mobilization of the ossicles by cotton tipped probe, applied directly to the malleus, combined with the use of Siegel's otoscope and the catheter, were the principal therapeutic means to which the improvement could be ascribed.

This is the first case happening in the author's practice in which supuration occurred after the operation, although this is a common occurrence as reported by others.

He thinks that the lesion in the case was a hæmorrhage into the labyrinth occurring during the progress of the anæsthetic. He concludes that the lesson of this case is that our prognosis must be more guarded in the future as to the results of excision of the ossicles and drumhead in chronic aural catarrh, and that patients of the age of this one are unfavourable for operation.

Compressed Air in Diseases of the Nose, Throat, and Ear. By Dr. SETH SCOTT BISHOP, Chicago.

The author gave the results of a series of experiments to determine the various amounts of air-pressure necessary for effective treatment of the ear, throat, and nose.

He found that the rubber air bags in common use by Americans exert a pressure of from six to fifteen pounds. While these afford sufficient pressure for spraying the nose and throat with hand atomizers, which do not require more than from eight to twelve pounds, they do not provide enough force for treating certain conditions of the middle ear, the dosage for which, in some cases, amounts to sixty or eighty pounds, or more.

In order to adapt the improved compressed air apparatus to the safe treatment of the latter class, Dr. Bishop has contrived an air meter, which places the volume of air and height of pressure within the knowledge and control of the operator.

This air meter consists of an air-pressure gauge placed between two valves in the escape pipe of the air reservoir. While it serves the purpose of indicating the whole number of pounds pressure in the reservoir, it also shows the height of pressure of the column of air that is escaping through the cut-off at the end of the treatment tube. One valve governs the volume of air used, while the other determines the amount of pressure.

This device places the use of the high pressure apparatus on a scientific basis. All guess-work is eliminated. A definite dosage of compressed air is made possible. Interrupted currents can be propelled into the middle ears with as high a pressure as seventy or eighty pounds, with the volume diminished in inverse ratio, with safety. But without this meter to guide in proportioning the volume to the density, the high pressure apparatus would not be safely available for ear treatment.

Dr. Bishop gave a detailed description of the air meter and directions for its use in projecting camphor-menthol and liquid lanoline and other sprays into the Eustachian tubes and middle ears. By this method, not only is the air filtered but the tubes and middle ears are medicated. With these controlling valves he has employed as high as ninety pounds pressure in certain chronic affections of the ears without any ill effects, and no case of rupture of the drumhead has ever resulted. Thus the ear is rendered nearly as accessible to treatment with the various volatilized medicaments and sprays as the nose and throat.

It is evident that an instrument that affords safe treatment with such high pressures can accomplish results that are impossible by means of rubber bags that furnish, at most, not more than one atmospheric pressure, or about fifteen pounds. But it should always be remembered that with a high pressure a small volume of air must be used. The following rule is proposed to keep the operator within the limits of safety:—The higher the pressure the lower the volume should be.

Another point worth remembering is that the pressure used in such cases as have atrophied soft palates should not be strong enough to strain them, especially if they are subject to attacks of rheumatic sore throat.

Dr. Bishop has adapted the Buttle's inflators to be operated by the improved compressed air apparatus, with the result of making the use of the Eustachian catheter unnecessary in the majority of treatments. With these inflators, containing medicated sponges and fitted with the nasal tip, the ears can be inflated and medicated on the principle of politizerization when the rubber balloon would fail. Consequently we may avoid the risk of irritating the nose and throat, and of conveying infectious germs by the catheter.

The same medicated inflator is fitted with a catheter tip to inject lanoline sprays into the middle ears through the catheter when required.

Catarrhal Sore Throat in the Lake Region. By Dr. J. M. G. CARTER, Waukegan, Illinois.

This paper does not discuss croupous and diphtheritic inflammations of the throat, but the catarrhal forms which are most frequent on the shore of Lake Michigan, and which usually terminate in recovery in from three to five days. During the last nine years the writer has treated more than two thousand cases of this form of sore throat, and has made careful study and observation to determine the etiological factors which combine to produce the disease. These observations and investigations have convinced him that climatic changes, such as variations of temperature, humidity, direction and force of winds, ozone, electricity, and the like, are the chief known causes of these affections. Cyclonic disturbances are accompanied and followed by outbreaks of catarrhal, as well as croupous and diphtheritic sore throat. Ozone has a tendency to dissolve membranes, and keep albuminous exudates in a liquid state. Hence, when ozone is abundant in the air, membranous formations are more easily controlled; but as ozone is an irritant to the respiratory mucous membranes, there may be as many severe cases at such times as when the atmosphere is damp, but the severity is generally due to

congestion and swelling and the destruction of tissue, not to the excessive formation of false membrane. The writer thinks that these diseases affect the Indians somewhat as they do people who are acclimatized, though perhaps less severely.

There is reason to believe that these cases are often, if not always, of bacterial origin, and the fact that the outbreaks occur under particular atmospheric conditions makes it probable that the climatic variations cause such changes in the mucous membranes as to render them suitable soils for the development of bacteria. These cases often appear to be contagious. Albumen occurs in the urine of many of these cases, but is perhaps due to febrile disturbance.

Astringent gargles, alcohol and glycerine gargles, yerba rheuma and other drugs by atomization; menthol, alcohol and camphor inhalation, and variously medicated vapours have given satisfaction in the treatment of this class of cases. The prognosis is always favourable.

A Case of Papilloma of the Epiglottis, &c. By Dr. A. B. THRASHER, Cincinnati.

Miss Pearl S., seventeen years of age, Springfield, Ohio, was referred to me by Dr. Langdon, March 3rd, 1892. The vault of the pharynx was covered with adenoid tissue, rough and lobular, which extended from the region of Luschka's tonsil, back and down over the posterior pharyngeal wall, to a point on a level with the upper surface of the epiglottis. This tissue was apparently about half an inch thick in the centre above, and gradually grew thinner as it extended downward and toward either side.

On pressing down the tongue a reddish glandular tumour was disclosed, which, on further examination, proved to be attached to the epiglottis. The tumour was about the size of a large English walnut, the surface being divided at irregular intervals by deep seams, and covered by small granulations, giving it somewhat the appearance of a large lobular strawberry. It was attached to the free border of the epiglottis, rather more on the upper than the under surface; the balance of the epiglottis presented a normal appearance as to both size and colour. The weight of the neoplasm was so great as to press the epiglottis downward, and its size so large as to completely shut off the under parts of the larynx from the laryngeal mirror. The voice was quite husky, and a nervous cough had been present for some time. There was increasing dyspnoea for some three months, this being really the symptom which caused the patient to seek relief.

After the epiglottic neoplasm had been removed, which was accomplished by means of a wire *écraseur*, the interior of the larynx was revealed. The movement of the left vocal cord was considerably impaired by some small sessile growths in the ventricle and over the left ventricular band, macroscopically quite like the tumour on the epiglottis.

After the lapse of two months there is, as yet, no tendency towards a recurrence of any of this tissue, that in the naso-pharynx and larynx having been removed by curette and galvano-cautery. No microscopic examination of the tissue was made, but the clinical history points to papillomata of the larynx, while the pharyngeal growth seemed to differ in

no respect from that which the author has in other cases classed as adenoid tissue.

A Case of Spastic Contraction of the Tensor Tympani Muscle. By Dr. C. W. RICHARDSON.

The essential features were the occurrence of ticking sounds heard in both ears, audible through the medium of the otoscope. The clicking sound was not synchronous in both ears, and not synchronous with the heart's action. The sounds in right ear were more rhythmical and more frequent to the minute than the left. There was no spasm of palati or constrictor muscles. Membranes were slightly dull, contracted, and manubrium directed almost vertically inwards; umbo resting upon promontory. There was no visible movement of membranes. Inflation through Eustachian catheter caused a change in character, and subsidence of snapping sounds. After several inflations there would be a momentary cessation of snapping sounds, followed by several short, sharp clicks, and then a cessation, followed again, in a moment, by the regular contraction. If inflations were persisted in, the sounds would subside for many minutes or several hours. After about six months' treatment the noises ceased. Patient died from a gradually progressive case of pachy-meningitis. From the autopsy, marked changes were manifested in membranes, cerebral cortex and in ventricles. The spasm of muscle was evidently due to centric irritation.

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(Continued from page 349.)

Dr. FAUVEL.—*On a New Symptom of Laryngeal Paralysis.*

This is a symptom Dr. Fauvel has for many years noticed, and consists in a particular odour exhaled by patients with paralysis of the laryngeal muscles. Since 1872 the author has noted the association in fifty cases. He gives in detail two cases of paralysis of the left recurrent due to aortic aneurism, where the garlic-like odour was very marked, and states that it is in these cases where the odour is most evident. He has also noted its occurrence in hysterical, rheumatic, and syphilitic paralyses, and those of central origin (locomotor ataxy, disseminated sclerosis), and of peripheral origin (compression by tumours, apical tuberculosis). In all these cases care has been taken to determine that the odour did not proceed from the nasal or pharyngeal passages, the mouth, trachea, bronchi, lungs, or stomach. Moreover, repeated washings have not got rid of the odour, and it was not due to any drug the patients were taking. The urine has been examined to exclude diabetes, and the result arrived at that it is an odour of the breath distinctive of laryngeal paralysis. It probably arises from secretions pent up in the larynx which cannot be rejected, dry and decompose. A steam spray of

Cherry-laurel water.....	50 grammes.
Carbolic acid	0'50 „
or thymol	2 „
Distilled water.....	500 „

is recommended, and internal administration, except in hysterical conditions, of iodide of potash. As the paralysis diminishes, the garlicy odour disappears.

Dr. POYET stated that he had sometimes observed fetidity of the breath in

persons with laryngeal paralysis, and had attributed it, as Dr. Fauvel had done, to fermentation of secretions which remained stagnant in the larynx or in the ventricle.

Dr. CARTAZ.—*On the Treatment of Rebellious Suppurations of the Maxillary Sinus.*

There are many cases in which, though amelioration is rapid, cure is very slow, or where when the patient ceases the irrigations the drainage tube is removed too soon, or for some other reason, the primary condition recurs. There are many cases in which it seems necessary to keep the fistula open for many months. Are there any points for prognosis of more or less rapid cure? or is there any explanation of those differences?

One point certainly must lead to diffidence in prognosis, viz., the long duration of the suppuration before the patient is treated. When this has lasted months or years, there is probably not simple retention but chronic inflammation, in which the bony skeleton subjacent may be implicated. There are unfortunately few signs to indicate the extent of these lesions or the degree of inflammation.

Electric illumination, though good, is not absolute. In most cases it furnishes excellent results, and the author has never punctured the sinus when it was not translucent without finding pus, and in three cases where, in spite of translucidity, he punctured the sinus he found no pus. The thickness of the bones, or variable conformation of the sinus in different individuals cannot modify the results of this examination if physiological conditions are normal. If no lesion of tissues or of bones exists, transparency must appear very clearly. It has degrees; when the mucous membrane is inflamed, or when the layer of pus is more or less thick, is perhaps the secret of the divergence which exists between rhinologists as to the value of this sign. Electric illumination teaches us by the opacity of the walls the presence of pus in the antrum without permitting an opinion as to the prognosis of cure of the abscess.

Another case of delayed cure is multiplicity of bad teeth. If one tooth by alveolar periostitis may cause inflammation of the antrum, it is legitimate to suppose that after extraction of the worst a nucleus of irritation may remain and keep up suppuration.

Sometimes fibro-cartilaginous septa exist, leading to lodgment of pus, which drainage through the nose or alveolus incompletely empties. After prolonged suppuration true osteitis may exist resisting simple antiseptic washes.

LUC has reported cures after ablation of fungosities and sequestra in patients who had long been unsuccessfully treated. When alveolar perforation has been for a long time followed by antiseptic washes, without leading to suppression of the flow, it is difficult to foresee cure without more radical methods, though it is not necessary to operate too early. Strong washes may be employed—two to five per cent. carbolic solutions, somewhat concentrated solutions of sulphate of alumina and potash, insufflations of iodoform and aristol. Failing these, ten per cent. chloride of zinc injections are to be held in the antrum five to six minutes, and then wash with boracic solution. The author has used "liqueur de Villatte," but the reaction was painful. It, however, cured the abscess. If caustic and astringent injections fail, the author opens the sinus by the canine fossa and curettes the cavity. The operation is scarcely more severe than perforation of the alveolus, and gives an orifice large enough for electric exploration. The author relates two cases in detail where he followed this plan. He thinks that it should only be resorted to in special cases when ordinary methods have failed. Such cases are in his opinion less rare than is supposed.

Dr. MOURE, like Dr. Cartaz, has seen empyemas resist all ordinary treatment. It is necessary to exert great prudence in the resort to surgical measures. The ordinary osseous walls are thinned, the orbital plate especially, and can be perforated with the greatest ease. Observations made by him upon crania show that there are considerable differences in individual cases. Osseo-fibrous bands are met with of different dimensions in the sinus, which hinder any treatment, especially curetting. There are also many cases which have no grave results, and which constant washes serve to keep in check for months or years. In these cases a half cure is better than the risk of an operation.

Dr. GAREL believed with Dr. Cartaz that in some rebellious cases an operation through the canine fossa is necessary. But prolonged irrigation has given unexpected results in one apparently hopeless case of empyema lasting for fifteen years. He thinks that operation should only be undertaken after definite failure to cure through the inferior meatus. As to the benignity of empyema of the antrum, he has known a patient who had each evening a temperature of 38.5° to 39° for two years, and which was only cured after operation.

Dr. MOURE, remarking that while catheterism of the antrum is apparently simple and easy, said he was not of this opinion. One portion of the orifice is often hidden or covered with the osteo-mucous lip of the infundibulum, and the osseous wall of the sinus in the middle meatus is in other cases extremely thin or papyraceous. He thinks that many catheterisms are simple perforations of this lamella, which is accomplished with great ease. This opinion he forms on observations made on numerous cadavers.

Dr. CARTAZ said that he had no intention of advocating opening through the canine fossa, curettage, or any operation. He desired only to speak of those cases in which the patient has arrived at such a condition as to require intervention, when the antrum cannot be reached through the alveolus, or this does not suffice to obtain cure. It must be remembered that perforation is often obtained through accessory orifices. He does not share Dr. Garel's opinion as to the ease of puncture through the natural orifice. In most cases it is difficult. He favours opening through the inferior meatus, which permits of reaching the middle plane of the sinus. He shares Dr. Garel's opinion as to the necessity of employing energetic irrigation before resorting to operation. In his observations he had in view only rebellious cases, where it was necessary to obtain as large an opening as possible.

Dr. GARRIGOU-DESARÈNES.—*Electrolysis of the Nasal Fosseæ with Electrodes of a New Model.*

For the last four years the author has employed platinum wires united at their extremities, and forming small laminae of four layers separated about a millimètre. They are ten centimètres long and one centimètre across. With these electrodes he has obtained cures much more promptly than with complete platinum plates of the same dimensions. In order to get the contact of the electrode with the mucosa as complete as possible he often applies a *pince-nez*. If only one of the fenestrated laminae is to be used, the others are covered with a very thin layer of caoutchouc, held in place by threads or by a band of paper. He always uses current strengths of twenty to thirty milliampères, but has attained ninety milliampères. Tolerance becomes greater when the contact has lasted some minutes. He uses a sulphate of mercury battery with a collector. The sittings last ten minutes. Having used electrolysis for ten years, the author has never met with any accident, and most cases have been completely successful. The same result is obtained with a less current and longer sitting. Cocaine (five per cent.) may be

previously applied. The other electrode is composed of lead, thirteen centimètres long and nine centimètres broad, covered with chamois and moistened with salt and water. It is placed upon the neck or knee. It ought to be shifted every five minutes or less to avoid blistering.

The author uses electrolysis for hypertrophy of the turbinates, for chronic simple coryza and atrophic catarrh. Its employment in spurs and deviations of the septum has given excellent results. [The author leads us to the inference that he indifferently applies the positive or negative pole to the affected part.]

Dr. MOURE was astonished that with intensities of eighty to ninety milliampères and monopolar electrolysis the patients had not experienced extreme pain, salivation, etc. He had not been able to go beyond thirty milliampères. The difference is probably due to the different galvanometers employed.

Dr. MIOT was astonished to hear of currents of ninety milliampères. He never exceeded twenty milliampères. In some he had reached with difficulty twenty-eight milliampères, and only in one forty-five. He used Gaiffe's galvanometer, while Desarènes used Chardin's, the graduation of which was different.

Dr. GARRIGOU-DESARÈNES said that it was upon northern patients he had used the greatest intensities. In a Warsaw physician he had used ninety milliampères for a sitting of five minutes, and forty milliampères in other sittings. The patient only experienced supportable pain and great salivation. In another, a Russian, he used sixty milliampères in two sittings of five minutes each.

Dr. DARZENS.—*On a New Mode of Treatment of Syphilis, and especially of severe Syphilis of the Nasal Fossæ, by administration of the iodides of potassium, soda, and ammonia. Advantages of this process and explanations of its success.*

After relating a case in detail, the author remarks that when iodide of potassium in average dose (1 gramme) is given to an ordinary individual the drug appears in the urine a few minutes after ingestion, and the greater part is eliminated at the end of half-an-hour. This elimination then diminishes until all is got rid of after about thirty-six hours. In some individuals this elimination is very rapid, almost immediate, and in such persons iodide can never have any utility. A means must therefore be sought of retaining the iodide in the system. Iodide of soda and iodide of ammonia are more soluble than iodide of potash, and they are eliminated by the kidneys before the latter, which will consequently be retained in the organism.

The author administers—

Iodide of potash	}	...	aa 15 grammes.
„ „ soda			
„ „ ammonia			
Biniiodide of mercury	...	...	0.05 centigrammes.
Water	...	...	300 grammes.

To take two tablespoonfuls daily.

Alkaline and carbolic washes are also prescribed for the nasal fossæ.

Dr. MOURE.—*A new Case of Indurated Chancre of the Left Nasal Fossæ.*

The author in 1887 communicated to the French Society of Laryngology one such case, and Dupond in 1887 ("Etude sur la syphilis du nez et des fosses nasales"—Thèse de Bordeaux—Paris: Odoïn) could only find three recorded cases. Cozzolino ("Revista clinica de l'Un. di Napoli," Jan. 1889) has added three cases. During the last year the author has observed a fresh case occurring in a man of twenty-five. The lesion was situated on the quadrangular cartilage, where there was a fungous ulceration, the septum being thickened and tumefied. The

ulcer was covered with pseudo-membranous exudation, removal of which left a bleeding surface.

Dr. HICGUET had seen two cases of chancre of the nasal septum. Both were in typographers, who were accustomed to use snuff and to employ a common snuff-box, the only explanation which could be given as to the origin of the disorder.

Dr. LACARRET.—*Syphilitic Condylomata of the Nasal Fosse.*

As secondary manifestations in the nose up to the present have only been described, ulcerations are oftenest under the form of fissures of the nasal introitus, whilst mucous patches of the pituitary membrane are much rarer. Syphilographers have not recognized verrucous and vegetating productions (condylomata) as secondary manifestations in the nose.

The author observed a case of condylomata of the right side of the nasal septum in a boy aged seventeen. There had been a chancre of the penis, and verrucous patches of the fauces were present. The septum was the seat of a lobulated tumour of greyish colour, projecting from the septum and about a centimètre in every diameter. Under biniodide treatment, and local applications of acid nitrate of mercury and gargles of iodo-iodide, he made good recovery.

The condition might have suggested tuberculosis or simple papillary degeneration, but the diagnosis of syphilis was confirmed by the treatment. If such lesions resist ordinary internal and external treatment, stronger local measures (strong iodine fifty per cent., acid nitrate of mercury to fifty per cent.) chromic acid, or galvano-cautery may be resorted to.

Dr. BEAUSOLEIL.—*Eversion of the Ventricle of Morgagni.*

Beyond the causes already known (hypertrophy, chronic eversion, diathetic inflammations) the author adds a case of purely inflammatory origin arising in acute laryngitis, and retrogressing when this disappeared.

The patient was a man aged thirty-two, who had had two previous attacks of catarrh and aphonia since March, 1890. In November, 1891, he suffered another attack, which was rapidly followed by aphonia, which this time did not disappear. On the left side of the larynx was perceived an oblong antero-posterior swelling occupying the fore edge of the ventricular band, with which it was continuous. It completely covered the left vocal cord, and was lost in the angle of the thyroid. During strong inspiration its volume diminished a little, permitting the edge of the vocal cord to be seen. The colour of the swelling was that of the ventricular band, and at its anterior end a little whitish fold, produced by folding of the mucous membrane, was seen. Treatment for simple acute laryngitis was adopted without diminishing the tumour, though all inflammation disappeared. Under applications of chloride of zinc the hernia disappeared.

It is probable that the earlier attacks of laryngitis and aphonia in this patient were accompanied with hernia of the ventricle. After his cure, a slight projection of the anterior portion of the ventricle still persisted.

Dr. FERRAS.—*A Case of Infectious Angina.*

The patient, a man of nineteen, on 24th November, 1891, had sore throat. On 1st December some red spots appeared upon the body. Next day the eruption extended to the lower limbs, and there were severe lumbar pains and swelling of both knees, which were very painful on movement. The eruption was a polymorphous erythema, forming festoons and circles, with an internal purpuric zone, and an external more recent and congestive zone, elevated and œdematous. Inguinal adenopathy existed. There was marked œdema of the malleoli, hands and feet. Temp. 30°. Some herpes existed on the lips. In the throat was a

simple slightly pultaceous angina, with injection of the anterior pillars, and some superficial ulcerations, recalling those of the angina, the date of which he fixed at the 24th November, before any of the subsequent symptoms. Then followed lively muscular pains in the arms, which were half-flexed and motionless, and there was rapid muscular atrophy. The angina disappeared, and endocarditis supervened, which yielded to treatment. It resembled the endocarditis described as septic by Bouilland. On the 2nd January the patient was well.

The author derives the conclusion that simple anginas should be treated energetically, and regards camphorated naphthol as the best local application, and hyposulphite of soda (two to four grammes a day) as the best internal treatment.

Dr. MOURE.—*Abscess of the Larynx consecutive to Scarlatina.*

Laryngeal complications in scarlatina are rare according to Trousseau, except in scarlatinal diphtheria, an error of observation which those who have since quoted Trousseau have wrongly attributed to him.

Dr. Moure gives the details of a case of scarlatina in a young man of twenty, convalescent, and who had experienced suffocation, and had expectorated blood-stained and putrid sputum. From the first he had suffered with great sore throat, and immediately after the disappearance of the eruption with fever, intense pain in the throat, hoarseness, and tumefaction of the angle of the jaw. Laryngoscopically Dr. Moure found the epiglottis red, denuded of epithelium, erect, and on its laryngeal face presenting a swelling especially marked at the extremity of the ventricular band. The ary-epiglottic fold of the same side was swollen and covered with muco-pus. Prepared for tracheotomy the same night, the condition improved and the swelling rapidly disappeared. Antiphlogistic treatment was prescribed (revulsions and emollient fumigations).

Dr. Moure is of opinion that many of the cases called acute œdema of the larynx are simple abscess. Certain authors consider acute abscess of the mucosa of the larynx as a true acute erysipelas or infectious phlegmon.

Dr. LUBET-BARRON related a case where nothing indicated the accidents which ended in the formation of a large abscess. On the previous Sunday a patient entered the Hôpital Cochin with difficulty of breathing. Suffocation became so intense that tracheotomy had to be performed. During the night the temperature rose from 37° to 39°, but fell in the morning. Pus containing numerous pneumococci was found in the canula. Laryngoscopic examination was not possible from the swelling of the epiglottis: the cavity of the larynx was filled with a red œdematous mass. This, with the finger, was found to be superficially smooth, soft, and fluctuating, and at the bottom hard and resisting, recalling the sensation of the epiglottis. The tumefaction extended to the left ventricular region, where fluctuation was distinctly perceptible. Incised with a knife, sanguineous pus containing numerous *staphylococci aurei* was exuded.

Dr. GAREL some years ago published a case of acute œdema of the larynx succeeded by pneumonia, and which at the time suggested infection by pneumococci. Since then Dr. Jossrand has published a case in which this hypothesis has been proved microscopically. As in the former case laryngeal œdema was complicated by pneumonia, and later on by a vaginal abscess. Pneumococci were found in all the abscesses. Other pathological agents than pneumococci may determine acute œdemas of the larynx.

Dr. POYET had seen a similar case some years ago. The patient exhibited considerable tumefaction of the left arytenoid, producing attacks of suffocation, pain on deglutition and alteration of the voice. The right side of the neck was the seat of hard induration from the ear to the clavicle, suggesting a carcinomatous laryngeal tumour.

All symptoms disappeared under simple emollient treatment—cataplasms, hot carbolio gargles and sprays—but returned after a chill, suddenly and violently, this time lasting long and necessitating tracheotomy, when the patient began by expectorating pus and recovered. The laryngoscope showed that the pus came from an abscess which had opened over the left arytenoid. The patient was immediately afterwards attacked with acute articular rheumatism, and Dr. Poyet believed that he had to do with a suppurative rheumatic arthritis. The patient is now quite well.

Dr. FAUVEL said that one day he was called by Trousseau to see a young girl who had had scarlatina running an abnormal course ten years previously. Desquamation had been suddenly suppressed. On examining the throat he found false membranes which led every three or four days, before expulsion, to considerable catarrh. Treated with tincture of iodine and nitrate of silver no result was obtained. Trousseau regarded the case as eczema of the trachea consecutive to scarlatina. Lhéritier, who was a great fancier of horses, suggested using an empirical treatment, which ordinarily succeeded well with those animals. This consisted of local swabbings with tincture of aloes. At the end of eight days of this treatment the patient was cured.

Dr. MOURE said that an interesting fact appeared to be that these abscesses developed with frightful rapidity. It is not surprising that they should be confounded with acute oedema of the glottis, which some authors consider to be true infectious phlegmon (erysipelatous) of the larynx. One lesson is learned—that is, the danger of digital explorations which determine an attack of suffocation. It should always be insisted that the laryngeal mirror should always replace digital examination.

Dr. HICGUET.—*A little known Affection of the Tonsils.*

The crypts of the tonsils are special lodging-places for micro-organisms, and it is an affection of the crypts of which the author speaks. When the patient was first seen mycosis was suggested, but doubts were thrown on this by microscopical examination. The patient was a young girl of thirteen, who had had sore throat for about a month. There was slight pain and no fever. The tonsils were of nearly normal size, but the crypts filled with white-grey caseous matter from which small filaments projected like the hairs of a brush. A microscopic examination showed that these filaments were lamellæ of cornified epithelium without any other elements. All the points being cauterized with the galvano-cautery, recovery was rapid.

Dr. MOURE thought the case to be tonsillar mycosis.

Dr. CHARAZAC did not doubt that if thorough microscopic examination had been made the mycelium would have been discovered. Cornified substance is not ordinarily met with.

Dr. GAREL thought mycosis of the pharynx to be comparatively frequent. He had notes of at least eighteen cases. It is often confounded with tonsillitis with white points. Certain portions of the mycosis are at their deep extremity hard and yellow from incrustated salts, and this calcification explains the difficulty in removing some of these islets.

Dr. FERRAS could understand the difficulty of Dr. Hicguet, for if these phosphatic deposits were oftenest in the form of masses they would not contain the isolated filaments met with in this case.

Dr. HICGUET said the idea of mycosis had occurred to him at the outset, but if he had hesitated at that diagnosis it was because the tonsillar production differed from the common descriptions of mycosis.

Dr. LUBET-BARBON.—*Bromide of Ethyl as an Anæsthetic.*

It is often necessary to give general anæsthesia for painful operations of short duration and small importance. Cocaine fails, and chloroform adds a new danger. Bromide of ethyl acts quickly, and its effects pass off rapidly. It is never accompanied with syncope like chloroform, but it requires certain rules to be followed which often are neglected, explaining the diversity of results. It is necessary to give the anæsthetic in large doses and without fear. A flannel mask should be applied as hermetically as possible to the face, covering the nose and mouth, and it must be folded so as to avoid contact of the anæsthetic with the skin, but not so as to allow any air to enter with the anæsthetic. The latter is poured on copiously and not drop by drop. The first struggles of suffocation are brief and shorter as external air is excluded. Five to six good inspirations suffice to produce anæsthesia. Sometimes this occurs before loss of consciousness, and a patient can be operated upon who is insensible and powerless, but able to obey orders, open the mouth, raise the head, and assist the operator. This is not the rule, however.

Complete muscular relaxation must not be waited for, ethyl bromide in large doses leading rather to contraction. If prolonged anæsthesia is required, as soon as the patient gives the first indications of sensibility a fresh dose must be given. Consciousness is regained with great rapidity. In a few cases cerebral excitement persists for some moments, resembling drunkenness. A great advantage of this anæsthetic is that patients are operated upon seated in a chair, since syncope is not to be feared. The author has used it for three years, and upon one hundred patients without any cause for alarm. All his adenoid vegetations and most aural polypi in difficult children have been operated on with this anæsthetic. It has to be given frequently in cases of spurs of the septum and hypertrophy of the posterior end of the turbinateds, but many times it has sufficed for the removal of diseased bones or scraping the tympanum.

Dr. MOURE said he had seen the author use bromide of ethyl, and had himself used it many times in children with excellent results. In adenoid vegetations especially it is marvellous. Absolute immobility is obtained, and even hypnosis of the patient who obeys commands. As soon as the operation is ended consciousness is recovered, and the patient can use his handkerchief and expectorate the blood. It has unusual advantages over chloroform, and the patient can be operated on seated on the chair. It is preferable for operations of short duration and for young subjects.

Dr. CARTAZ remarked that, if his memory did not fail him, the American journals had recorded four cases of death from bromide of ethyl. It is an anæsthetic which must be employed with caution, and ought not to be employed in prolonged operations.

Dr. HICGUET remarked that Dr. Lubet-Barbon had called attention to a state of cerebral excitement observed for a quarter or half an hour with bromide of ethyl. These are conditions never seen with chloroform, which is also more easily supported by children than adults. He makes children respire a little chloroform, which produces a state of intoxication sufficient for him to operate. He sees no danger in chloroform if properly administered, and finds no difficulty in operating with the head low.

Dr. SUAREZ DE MENDOZA asked whether it was really necessary to anæsthetize for post-nasal growths, if some present believed with him that chloroform ought to be reserved for too refractory subjects, or those excessively frightened at the sight of instruments. With a little patience, and by making the first attempts with great gentleness, a child can often be induced to give two or three sittings a

week, and in two weeks the cure is complete. In more than one hundred cases he has never had occasion to give chloroform.

Dr. GAREL said that, like M. Suarez, he never used anæsthetics in the removal of adenoids. Great resistance on the part of children is very rare. He makes thorough local anæsthesia with cocaine, and, after the first application of the forceps, the child allows the operation to be readily completed. If it can be proved that bromide of ethyl is not dangerous, it will be a useful help to the operator.

Dr. LUBET-BARBON, in reply, said he did not wish to criticize the methods of Drs. Suarez and Garel. In reply to Dr. Hicguet, he would say that asphyxia by chloroform is produced especially at the commencement of the administration. The practice of Dr. Hicguet does not lessen the dangers of chloroform administration.

Dr. SUAREZ DE MENDOZA.—*On Some Inconveniences of the Nasal Douche, and on the means of avoiding them.*

Dr. NOQUET advised careful examination of the nasal fossæ, in order to determine that the passages were permeable, and that the fluid would easily flow out.

For a number of years he has used the English syringe in preference to Weber's syphon, and has never obtained the least inconvenience produced by the douche. The syringe is less likely than the syphon to allow penetration of liquid into the tympanum, because its jet is intermittent, and because the patient can cease to inject as soon as he feels the need of closing the mouth. It is important to use only solutions of well-filtered or at least boiled water. Then if liquid does get into the tympanum, it is aseptic and cannot cause purulent otitis.

Dr. SUAREZ remarked that the English syringe had its inconveniences—amongst others, inability of the patient to graduate the jet, thus often pushing more strongly than he ought to do.

Dr. NATIER.—*A Case of Crico-arytenoid Arthritis (right side) due to tertiary syphilis, observed in a woman of sixty years of age; difficulty of diagnosis; complete cure by iodide of potassium.*

The case is given in minute detail. It is remarkable by reason of the late appearance of syphilis. At twenty-eight the woman had had a still-born child, then two abortions, but from that time up to the present had exhibited no symptoms of syphilis.

The patient had had many attacks of articular rheumatism and neuralgia in the head. Deglutition was painful, there was frequent dry cough, and dyspnoea at night. At the base of the right arytenoid and on its anterior surface was a tumefaction, diffuse, and of the size of a cherry, and on its surface were two small lenticular ulcerations. The joint was completely motionless on articulation, and the vocal cord (right) scarcely moved from the mid-line. Sedative sprays were given to control the pricking and pain, and iodide was given internally. Neglecting the treatment the symptoms became much aggravated, especially pain and dyspnoea at night, and cough which provoked nausea. The patient lost flesh very greatly and appeared in a desperate condition. Sharp pains were felt in the right ear. A round tumour was seen now to project from the right arytenoid region, with numerous ulcerations on its surface. The growth spread to the right side of the epiglottis, where there was also an ulcer. The right ventricular band was greatly proliferated, and had a large ulcer on it. The vocal cord was no longer visible. The laryngeal opening was considerably contracted, explaining the

increased dyspnoea. There were no enlarged glands in the neck. The condition resembled epithelioma, but before radical operation full doses of iodide (eight to ten grammes a day) were decided upon. A small piece of the tumour was also removed for examination. The tumour, examined by Dr. Gombault, was pronounced to be "tubercular or syphilitic, but certainly not epitheliomatous." After an absence of some days the patient reappeared, greatly benefited by the treatment. A laryngoscopic examination showed that the tumour was less and the ulcerations were healing. Later on, all parts resumed their normal appearance, the paralysis of the cord disappeared, and the patient was completely cured.

Dr. GAREL.—*Stereoscopic Photography in the Normal and Pathological Anatomy of the Larynx and Nose.*

The author presented a series of photographs taken in his clinic at the Hôpital de la Croix-Rousse, according to the method of Prof. Donnadiou of Lyons. They were photographed by complete immersion in water. He insisted upon the remarkable relief given by the stereoscope, which gives pictures much superior to those ordinarily obtained, and a remarkable precision in details.

Dr. NATIER presented a case of *Cachexia Strumipriva, with Complete Paralysis of the Right Vocal Cord and Paresis of the Left Vocal Cord, consecutive to Ablation of the Thyroid Gland.*

The patient was a young man of twenty-seven, who first came under observation twelve years previously. At seventeen he had typhoid fever, has always been sensitive at the throat and had slight trouble on deglutition; at twenty he entered the army and became an instructor in gymnastics. During 1890 his neck began to swell, he breathed easily and spoke with ease, but after swallowing, especially soups, he had great trouble and was obliged to make effort, some of the fluid returning through the nose. He entered a hospital in August, 1891, where he was advised to undergo operation. The goitre was removed. Immediately after this, swelling of the neck occurred, especially on the right side, and severe attacks of suffocation necessitating tracheotomy. For some days liquid food, which alone he could take, was rejected partially through the canula and the nose. He remained in bed for six weeks, and the first day he attempted to go out he experienced trouble in breathing, and he could only speak in a low voice and in the room. As the symptoms increased he attended the clinic of Dr. Gouguenheim. The laryngeal stenosis being alarming, this physician advised tracheotomy, but in consequence of the patient's refusal administered mercurial peptone injections. Two months later the patient left the clinic without benefit.

At the present moment the patient has a facies characteristic of "cachexia strumipriva." The skin is also dry and yellowish, and the nails are dry and hard. The pulse is slow and small. The patient is emotional, and weeps without reason. His speech is difficult and drawling; words are scanned and emitted slowly. The voice is low. Respiration—and especially inspiration—is troublesome, and causes him the gravest fears. Laryngoscopically the right vocal cord is absolutely immovable and in a median position, from which it does not separate at all. The left vocal cord is simply paretic, but severely so, since in the deepest inspiration it scarcely moves one millimètre, or one and a half millimètres at most. We can only regret that operative interference has had such a deplorable result.

Dr. MOURE, confirming Dr. Natier's laryngoscopic examination, also noticed that the arytenoid region was œdematous, especially on the left side. He does not think that the recurrens have been cut, which would have led to a cadaveric position of the cords. He thought that the recurrens have been involved in the

cicatricial tissue, which has caused paralysis of the posterior crico-arytenoid muscle. He would insert a canula, and wait further developments.

Dr. MOURE presented a *New Nasal Speculum*. In operating for exploratory puncture of the antrum it is sometimes difficult to withdraw the trocar through the speculum. He has therefore devised a speculum open on the side like a uterine speculum. The ordinary speculum does not open sufficiently at its base, and the author's new instrument is composed of two horizontal cylindrical plates. Good illumination can be obtained, and it can be withdrawn easily. It is meant to replace the speculum of Duplay, commonly used in France.

Dr. GARRIGOU-DESARÈNES described his own speculum, which he has used for ten years.

Dr. MIOT said that bivalve specula had advantages, and permitted a full view of the interior of the nose during the introduction of instruments.

Dr. MOURE said that his new speculum was devised to replace those others, with which we could see perfectly well, but which were inconvenient for certain operations.

REVIEWS.

Maladies de la Bouche et du Pharynx. By Dr. A. RUAULT. Paris : Masson, 1892.

THIS, which forms part of the third volume of the "Traité de Médecine," published under the direction of Drs. Charcot, Bouchard, and Brissaud, is a work such as might have been expected from the reputation of its author. It gives a very complete account of diseases of the mouth and pharynx. The section dealing with diphtheria is especially interesting, comprises no less than 87 pages, is fully up to date, and gives a very complete account of the pathology of this disease.

The author defines diphtheria as a disease caused by a special micro-organism, secreting a poison, which, being absorbed, affects the general system. This specific inflammation gives rise to fibrinous pseudo-membranes, enclosing the specific bacillus. When situated in the pharynx this is *diphtheria*; when in the larynx it is *croup*.

The researches of Klebs, Loeffler, and latterly of Roux and Yersin, are referred to in detail. These latter authors signalized the dependence of the false membranes upon the specific bacillus, the paralyzes and other symptoms upon the poison evolved, and the secondary infections upon the micro-organisms which accompany the Klebs bacillus, the streptococcus of Fehleison especially increasing the virulence. A great many researches (Morel, Grancher, Barbier especially) have supplemented those of Roux and Yersin, and suffice to lead to the differentiation of certain clinical forms of the disease, and as indications for prophylaxis. A very complete and carefully written account is given of the etiology and pathogenesis, and precise prophylactic rules are laid down.

Isolation of the patient is not sufficient, but all objects which have

been in contact with him should be carefully disinfected, which ought to be performed with boiling water or steam. All secretions and even faecal matters (since false membranes may be swallowed) should be disinfected. Persons coming in contact with the patient should only enter the room when clothed in a blouse or cloak reaching to the feet and covering all their clothing. Disinfection of the hands is of extreme importance. This cannot be done with boiling water, and ordinary antiseptics, including liquor Van Swieten, are not sufficient, since the diphtheritic virus is very resistant to microbicides. Of all antiseptics, phenic acid has been shown in large doses to be the most effective. A solution of phenol in sulphuric acid (20 per cent.) is only effective. Cultures remain sterile only when the phenol is 10 per cent. in glycerine, or 20 per cent. in oil. The sulphuric phenol is the only solution which, being antiseptic and non-caustic, is serviceable for disinfection of the hands. The hands should be dry when put into it, and afterwards rinsed clean with a large body of water.

The diverse forms under which diphtheria is manifested may all be reduced to two forms—

1. Pure diphtheria, *monomicrobial* or *bacillary*.
2. *Polymicrobial* diphtheria, of which there exist two forms, a *cocco-bacillary* and a *streptococco-bacillary*.

The first form is the "normal" of Trousseau, the "toxic" of Grancher, the "diphtheroid" of Lasègue, and the "abortive diphtheria" and "toxic diphtheria" of others.

The false membranes present at their superficies a layer of Klebs bacilli, or along with a few indifferent micro-organisms, generally streptococci of feeble virulence. The onset of the disease is invariably very insidious; the throat affection is very slight, and often absent; the submaxillary glands are swollen. At first the throat is only a little reddened, subsequently false membranes appear (twenty-four to thirty-six hours), generally at first discrete, later continuous. Fever is slight at first, and disappears at the end of two or three days. At the end of eight to twelve days cure of the throat is complete, and general symptoms amend. The false membranes may spread to the nose and neighbouring parts, or larynx (croup), increasing the general intoxication and danger (asphyxia, broncho-pneumonia). It is this form of diphtheria in which local treatment yields the best results.

The second form (*polymicrobial*) belongs to the kind commonly called "grave, toxic, hypertoxic, malignant and infectious" (Grancher). It is with this that should be classed those *secondary diphtherias* which occur at the close of certain infectious diseases, *e.g.*, scarlatina, measles, whooping-cough, typhoid, etc.; also should be included cocco-bacillary diphtheria (Barbier), since it differs from streptococcal severe diphtheria. Its characters are glandular tumefaction without puffiness, false membranes, mixed with muco-purulent secretions, resting on a red and tumefied mucous membrane, and muco-purulent expectoration. Certain other forms may on further study be included with this type. These are not accompanied with considerable glandular tumefaction, at least not

with puffiness, and do not cause very marked anæmia and prostration. The appetite is preserved better than in true diphtheria, and albuminuria is slight; but the false membrane is thick, stratified, greenish, rapidly invading; the mucous membrane below is red, sometimes bleeding at points, and expectoration is slight or moderate, and the breath devoid of fœtidity. The local condition would recall malignant diphtheria. Evolution is variable, and the patient is exposed to all the toxic and infectious complications of the infectious strepto-bacillary form. Most of these cases are modifications of the latter, since, in patients who have succumbed to secondary broncho-pulmonary or croupous complications, without septicæmia, the cervical glands and lungs are found to be invaded by the streptococcus.

The *streptococcal-bacillary* form may appear in the course of purely diphtheritic angina. It then occurs during its first period—during its defervescence—or even when nearly completely cured, and the signs and symptoms appear only secondarily. It may also occur during the course or at the end of a simple angina, caused by the streptococcus, or it may appear suddenly; the *débüt* is almost always sudden and violent. Fever varies in intensity: there may be rigors and elevation of temperature, or the latter may be temporary or insignificant, or even hypothermic. Its suddenness is evidenced by the rapidity with which the general toxic and septicæmic symptoms are accentuated (anæmia, prostration), and the suddenness of the local symptoms, the mucosa being the seat of tumefaction as soon as it becomes red, sanious, or bleeding, and covered with thick, soft, putrid, brown or yellow false membranes, exfoliating and reforming with rapidity, and horribly fœtid. From the commencement the submaxillary and sterno-mastoid glands swell, and this becomes considerable. Diffuse œdematous infiltration of the cellular tissue occurs, with which the glands are confused.

Pain of the throat is very early, and soon becomes intense, the general condition aggravates, adynamia becomes more pronounced, and the patient less sensible. The face swells, and becomes cyanosed. The urine often contains a great quantity of albumen. Diarrhœa often occurs. The false membranes spread to the nose, middle ear, and conjunctiva, occasioning sero-fibrinous or sanguinolent secretion, or completely hæmorrhagic. Invasion of the larynx and respiratory passages is very frequent.

In the gravest cases evolution is so rapid that the patient succumbs to intoxication and septicæmia before the pseudo-membranes have time to extend or any infectious complication to be produced. Prostration is great, increased so that in three or even two days, or even twenty-four hours, death occurs from collapse or syncope.

If the course is slower, complications of croup and broncho-pneumonia occur, or toxic accidents, like paralysis, endocarditis, etc.

In favourable cases the general condition sometimes begins to amend at the same time as the throat. A patient may escape the severer sequelæ, or be affected only with curable complications (paralyses, glandular suppurations, otitis, etc.), and may after long and slow convalescence be cured definitely. In all cases he will be left with alterations of the throat,

losses of substance of the tonsils or palate, or with chronic pharyngitis. In young subjects persistent glandular swellings are frequent.

It will be seen that M. Ruault endeavours to classify the different types of diphtheria upon a very scientific basis. The importance of bacteriology is nowhere more markedly exhibited than in the results which have ensued from its application to the study of this disease. We may say that we are now beginning to fairly comprehend a disease which has long baffled physicians, and to this end no scientists have contributed more solidly than our French *confrères*.

It scarcely needs to be said that M. Ruault places great reliance on the bacteriological diagnosis of the disease. It, however, takes twenty to twenty-four hours for the inoculated tubes of serum to develop the characteristic colonies, and occasionally three or four days. The microscopic test of Roux and Yersin, at first simple spreading of the secretion on cover glasses, then sections, permits, if the results are negative for several days, of the exclusion of diphtheria. If, however, bacilli are very numerous, the onset of diphtheria is very probable. An ideal test—which, however, is yet wanting—would be a chemical reaction given by the diphtheritic poison in the urine, or watery extract of the false membranes. Treatment, as necessarily follows from the author's exposition of the disease, must be severely local—to remove and destroy the false membranes—and general, to control the poison in the system. For the former nothing equals phenic acid, swabbed and irrigated, and for the latter quinine and antiseptics like benzoate of naphthol.

In the chapter upon hypertrophy of the tonsils, the author counsels that in children who have hypertrophy of the pharyngeal tonsil along with soft enlarged palatine tonsils, the former should first be removed, the palatine tonsils frequently rapidly diminishing in size after the post-nasal operation. He speaks favourably of ignipuncture, especially with the modified Paquelin cautery.

The acute non-specific anginas are defined by Ruault as common acute inflammations developing under the influence of phlogogenous micro-organisms, devoid of specificity. As these phlogogenous agents do not possess any distinctive clinical or anatomical characters, the classification of these disorders cannot be etiological.

They are thus different degrees of inflammation modified by the site, *i.e.*, superficial or deep. Amongst the micro-organisms which occur in these inflammations are those which are commonly found in the mouth, especially staphylococcus albus, streptococcus pyogenes, and Talamon's pneumococcus, and it is to this latter that secondary lesions more or less distant from the throat are chiefly due. Why these organisms, which normally exist in the mouth, do not cause pathological conditions, is due to phagocytosis. When the ordinary conditions of the struggle between the mucous membrane and the micro-organisms are modified, the latter increase, and through the failure of resistance of the former find a means of entry. This question of phagocytosis is discussed fully by the author. It is both the quantity and the quality of the micro-organisms which will determine the nature of the inflammation resulting.

Inflammation is a defensive act of the mucous membrane, and its intensity will depend upon the energy exhibited by the organism to attain the destruction of the infective agents, and the time necessary to accomplish it. If these agents reach the sub-mucous layer, the reaction of this will cause a phlegmonous inflammation, terminating in suppuration when the leucocytes succumb in too great number. Under the influence of many conditions destruction of the tissues will become greater, and a sphacelus or gangrene will result, with general intoxication. The microbes may not all be destroyed *in situ*, but some may penetrate the circulation, arriving at distant places, where resistance is slight from some old trouble. Just as a primary angina may lead to general infection, the latter may give rise to a secondary angina of which Kannenberg, Landouzy, Dubousquet-Laborderie, and Joal have given examples. The cases recorded by Froelich are typical.

We have not space to follow the author further in these interesting studies. We have cited enough to show that M. Ruault has contributed a volume which is imbued with the scientific spirit, and which is at once a learned and a practical contribution to the literature of diseases of the pharynx. In this volume the old lines of book-making are abandoned, and a serious and, so far as it can be, successful effort is made to supply a basis of bacterio-pathology to the subject. The result is a work which no physician can afford to ignore.

R. Norris Wolfenden.

Transactions of the Nineteenth Annual Meeting of the American Laryngological Association. New York: Appleton & Co., 1892.

THIS volume, which contains seventeen papers, published in full, as presented by various members of the Association at the annual meeting held in Washington in 1891, bears ample testimony to the high scientific standard of the work done by this Association, which is the *doyen* of all similar associations, and must always, so long as it maintains its present high standard, be the model of what similar societies should endeavour to attain to. This particular volume bears a melancholy interest from the fact that therein is printed, as an appendix, the inaugural thesis of the late Dr. Frank H. Potter, entitled "Cystoma of the Nasal Passages, with Report of a Case," and this is followed by a sympathetic obituary notice of this talented young laryngologist. It is unnecessary to refer in detail to the work recorded in this volume, since all has received notice previously in this Journal. We may be allowed to congratulate the Association upon its flourishing condition.

R. Norris Wolfenden.

Annual of the Universal Medical Sciences. Edited by Dr. SAJOURS. Philadelphia: F. A. Davis, 1892.

THIS colossal work is well known, and that it has reached its fifth year of publication, with no falling off from the standard of excellence originally attained, is a tribute to the untiring and immense zeal of Dr. Sajours and his army of co-editors and collaborators, and to the great enterprise of the publishers. It is certainly one of the most magnificent scientific

literary enterprises of the century, and fully deserves the success which we believe has been accorded to it. We may, however, be permitted to make one suggestion. We have often heard medical men say that they would be glad to be able to purchase the one volume which they require if they could only do so without being saddled with the other four volumes. This is especially the case with the specialist, who perhaps would wish to have the one volume relating to his specialty, and to whom the remaining volumes of the publication, owing to want of reading leisure, are but as literary curiosities on his library shelves. If the publishers saw their way to separating the work in this fashion, we believe that they would gain an increased number of subscribers, in this country at least.

R. Norris Wolfenden.

Anæsthetics: Their Uses and Administration. By DUDLEY WILMOT BUXTON, M.D., B.S. Second Edition. H. K. Lewis, 1892.

IN this second edition of Dr. Buxton's little work the greater part of the book has been recast, and a good deal of matter has been rewritten, which considerably enhances its value. It is a safe guide to the subject with which it deals, and is certainly a most useful book for the senior student, thoroughly practical, as indeed we should expect from a man of Dr. Buxton's experience in anæsthetics. We note that he prefers chloroform for operations about the mouth, jaws, and respiratory tract, because narcosis is deeper and more prolonged, its vapour is not easily ignited, and it can be conveniently given through the nose. He prefers rectal etherization as more convenient for the operator and more effectual in the anæsthesia produced, in removal of the tongue, jaws, staphyloraphy, and especially for excision of the larynx. While considering favourably the use of ether in operations for post-nasal growths, chloroform possesses the disadvantage that the patient remains longer under its influence, and so it is less easy to avoid blood entering the air passages. When the use of chloroform is undesirable he finds the A. C. E. mixture in succession to gas answer fairly well. It does not cause so much hæmorrhage as ether, and the patient may if necessary be again and again anæsthetized, after emptying his mouth of blood, until the operation is complete. Though producing much congestion and increasing hæmorrhage in these operations, if properly managed ether answers very well in these cases. The various anæsthetics, local and general, are passed under review, and cocaine comes in for a full share of attention. *R. Norris Wolfenden.*

OBITUARY NOTES.

WE regret to notice the death of Mr. Emil Behnke, which occurred at Ostend on September 17th. He was born at Stettin in 1836, and came to England at the age of twenty-nine, where he since resided and followed the profession of voice trainer. For some years past he had been associated intimately with Mr. Lennox Browne, and together they produced a work entitled "Voice, Song, and Speech," which has gone through thirteen editions. Mr. Behnke's views are well known to readers of this Journal, all of whom will share regrets at his premature decease.

Dr. JULIUS BEREKSZASZY, of Vienna, died at Zandpoort, in Holland, on the 10th August last, aged forty-six years. He was spending his holiday at the Dutch watering-place, when one day he was observed to fall on the sands, and died immediately afterwards from the bursting of an aneurism of the aorta.

This sad intelligence will be received with mournful regret by his numerous friends. For many years Dr. Berekszaszy was a prominent figure in the Polyklinik of Vienna as assistant to Prof. Schnitzler. He was well known to all throat specialists who studied at Vienna, all of whom will remember his genial and kindly disposition, his patience and painstaking with those who were acquiring the use of the laryngoscope, and the pleasure he took in helping those who showed proficiency or interest in their work.

For the last four years he conducted a private clinic of his own, which was largely attended by English and Americans. He spoke English well, and often delivered his lectures in that language. He was widely known and greatly respected in Vienna by his colleagues and others, and will long be remembered by the patients who flocked to his clinic as a kind friend. The Vienna medical school will lose in him one of their most amiable and accomplished representatives, and the medical world abroad, particularly in England and America, one who rendered valuable assistance to the younger members who visited Vienna.

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THE USES AND ABUSES OF COCAINE,
With reference to MUCOUS MEMBRANES especially.

By ARTHUR G. HOBBS, M.D. (Atlanta, Ga.),

Ex-President of the American Rhinological Association, Member of the American Medical Association, of the Georgia State Medical Association, the Atlanta Society of Medicine, etc., etc.

SINCE I received my first twenty grains of the hydrochlorate of cocaine (a part of the first two-drachm package that arrived in New York), I have used many ounces; perhaps, altogether, by myself and assistants, as many pounds as my original package contained grains.

It will not be amiss for me to say in the beginning that I now have very different opinions of its uses from those I entertained during the first years of its advent. However, one of my original opinions of its applicability has only become more and more confirmed with my increased use of it, and that is that its utility is principally confined to its local application to mucous membranes.

The softer the mucous tissue to which it is applied, the sooner is its effect reached, and the less the quantity necessary; and, as a consequence, the quicker and more decided is the toxic effect when its application is persisted in to this extent.

The general symptoms, however, are, everything else being equal, much oftener present in proportion to the area of membrane surface involved than in proportion to the strength of the solution applied. Hence, sprays of a weak solution are liable to produce toxic symptoms, when much stronger solutions can be applied with a saturated cotton probe or wad, to a limited area, almost with impunity.

The constitutional effects of cocaine are manifested by a feeling of faintness—it may be even to the loss of consciousness—a trembling of the limbs, a pallor of the face, etc., any or all of which may appear in one minute or in fifteen minutes after the application to a large surface. Again, these symptoms may be produced by a small quantity of a one per cent. solution in one individual and not in another, even if in the latter both the strength and quantity be ten times multiplied. I have never yet reached a conclusion as to the average amount of cocaine that is necessary to produce the constitutional symptoms; neither do I ever know, the first time I use it, how to estimate the individual's susceptibilities.

Every individual seems to be a law unto himself as to the quantity necessary in his own case to accomplish complete local anaesthesia; and even in the same person the amount will vary at different times, with no apparent cause. Under similar circumstances I find it impossible to reach a complete local anaesthesia, in some, short of the toxic symptoms; while in others, one-tenth of the amount and one-tenth of the time will render the application of a galvano-cautery absolutely painless.

To obviate the unpleasantness and delay caused by the constitutional symptoms, it is my custom to administer a stimulant of brandy or whisky at their first indications, and make the operation quickly and, always under such circumstances, painlessly. When it is found by trial that one bears the drug badly, it would be well to always give a stimulant before the second application is made.

I am sure that the last thousand galvano-cautery operations I have made would represent a much greater per cent. that were absolutely painless than the nearly three thousand cauteries that preceded. Perhaps this has been due to my greater familiarity with the technique of cocaine applications in the more recent cases.

In some, its effects in the superior pharynx are peculiarly distressing, more especially at the first application, but less and less so afterwards. However, it is well to remember this and avoid it when making local applications above, by not allowing the solution to gravitate from the cotton plug.

The time necessary for cocainizing a mucous membrane is perhaps as indefinite as the strength of the solution: both due to that unknown quantity, the individual. Approximately, however, four to ten minutes and a four to ten per cent. solution for a small surface may be regarded as an average. If the intention is to produce the effect over a small surface only, as in galvano-cautery operations, a concentrated solution ten to twenty per cent. should be used, and the result expected in four to eight minutes.

If, however, a general turgescence of any membrane should suggest the use of cocaine, then a spray of a very weak solution—a one or a two per cent.—should be expected to accomplish the desired result in one or two minutes. In either case, the general effects may appear without any warning and mar the anticipated good results, or at least render an otherwise easy operation tedious and unpleasant.

It has been my custom, from the beginning, to make my solutions at the moment I use them and to vary their strength according to the case, and

as I use no weights or measures I never know, except approximately, the strength. The range is so great that I hesitate in stating it, as I have not space to give my reasons for sometimes using a one grain to the minim solution, and again, only a one grain to five hundred minims. As a general rule, however, the strength should be in inverse proportion to the surface to which it is applied. Since my many disappointments with ready-made solutions of cocaine, during the first few months of its advent, I have never risked any solution that had not been recently dissolved.

In case it should be necessary to dissolve a large amount, it would be well to add boric acid for its preservation, in a proportion of about one grain of the latter to ten grains of the former.

For safety, it is best to supply the drug instead of giving the patient a prescription to have filled and bring with him for an appointed operation. The operation will thus be less magnified in the patient's mind, and he will be less liable to familiarize himself with the proportions and uses of the drug, should the temptation to use it himself arise afterwards. For these reasons, I do not, in any instance, give a patient a prescription containing cocaine as its leading ingredient.

As an ingredient in sprays, I find it abused more, perhaps, in hay fever prescriptions than anywhere else. This is true also where it is prescribed in the form of powders for this disease.

The turgescient condition of all the mucous membranes of the upper respiratory tract, especially in the nasal turbinates, that is always present in hay fever patients, is so quickly palliated and rendered bearable, that the temptation is great to prescribe cocaine in some form for the patient's own use; but it is a dangerous experiment, and one to be ventured upon only in exceptional cases.

During the past few years I have seen many journal articles that claimed for it a decided aphrodisiac effect, while my observations have been universally to the contrary. It will not be departing too far from the subject if I mention the effects of cocaine (through the mucous membranes) upon two cases of priapism, notwithstanding the fact that the results in these cases were reached through the general systemic impressions of the drug. The two young men, who were the victims of this rather unusual disorder, came under my observation by accident, and at intervals of about three years each came to my office in a carriage for a coincident nasal and pharyngeal inflammation. Cocaine dissolved in vaseline, together with a small quantity of campho-mentholine, was sprayed into the nasal and pharyngeal cavities, to the great relief of all the unpleasant symptoms in these regions.

But this was not all. In the first case, to my surprise and to the patient's great joy, the other and more painful malady disappeared within ten minutes. In the second case the symptoms were almost exactly like the first, and the patient's delight was greater than my surprise, as I was this time anticipating a similar result from the same treatment. The relief of the priapism, in both cases, remained permanent.

In both instances the usual treatment for such cases had been resorted to, apparently without any result, for twenty-four and thirty-six hours respectively, only to be completely relieved by a cocaine spray used upon

a distant mucous membrane for a coincident malady. It would seem that in these cases cocaine acted as an anaphrodisiac, and it should not be surprising when we remember that its primary effect is to reduce a turgescence of the turbinates, and that these tissues are analogous in many respects to the erectile tissues that are involved in priapism.

I desire here to emphasize most decidedly one contra-indication in the use of cocaine as a collyrium, and that is that *it should never be used when an abrasion of the cornea exists*; nothing in the form of a collyrium is more deceptive, as it is also most grateful to a denuded corneal surface.

The cornea is covered with the epithelial layer of the conjunctival mucous membrane only; here no middle layer proper exists whence it can derive its nutrition, hence it quickly loses its vitality when subjected to this local anæsthetic. So also the outer layer of the cornea, receiving its nutrition by imbibition only, seems to be even more susceptible to the destructive effects of cocaine.

I have seen a number of cases during the last few years, especially since this drug has been introduced into general use, in which the cornea has been greatly damaged by its constant and frequent introduction for no other purpose than the temporary relief of pain; but, unfortunately, the relief thus produced proves to be a delusion, and the destruction produced upon the cornea is only masked for the time by the anæsthetic effects.

I have especially seen these bad results in the cases of physicians who had themselves persisted in its use for the comforting effects to their own eyes, both during the presence of foreign bodies on the cornea and after their removal.

Cocaine is contra-indicated also in any corneal inflammation, and should not be prescribed beyond the acute stage of any form of conjunctivitis.

I have had but little experience in its use beyond its local application to mucous membrane surfaces, because I have never believed that its range of utility extended any further, except, perhaps, in a very few instances; hence I know very little of its general usefulness hypodermically, as it has usually seemed to me to be quite as painful to introduce it in this manner as the pain of the minor operation would be, especially when we consider the limited quantity that can be borne when it is introduced so directly into the circulation. I have sometimes, however, injected the solution into the tonsillar mass to hasten anæsthesia, but the toxic effects follow so quickly after its introduction into the circulation in this manner that I always hesitate to resort to this means in an untried subject. Yet, in some operations on the eye, as in tenotomies, iridectomies, cataract operations, etc., I frequently use the syringe for introducing a weak solution—one to two per cent.—subconjunctivally, in subjects that do not succumb to a four to six per cent. solution applied superficially for fifteen to twenty minutes at short intervals.

In preparing for a tonsil amputation, I use a cotton probe saturated in a five to a fifteen per cent. solution, and apply it to the whole surface of the mass at once: then I send the patient to a waiting-room, and

perhaps in the meantime—about eight or ten minutes—see another patient; then make a second thorough application, and wait three to five minutes before I use my knife and hook tonsillotome.

Occasionally, in an extremely sensitive patient who has not by this time exhibited any of the general effects, a five per cent. solution may be introduced into the tonsillar mass with a long hypodermic needle before proceeding to amputate.

In nearly five thousand tonsil amputations (four-fifths of which were done under cocaine) I have never had a dangerous hæmorrhage, and not more than a dozen cases that even proved to be troublesome from this cause.

Undoubtedly cocaine exerts a decided hæmostatic effect upon hypertrophic tissue, especially when it has thoroughly saturated the mass before an incision is made. Yet, after the solution of continuity, its blood-staying qualities are not equal to many other hæmostatics, and it cannot be relied upon for this purpose.

During the first years of its use, this drug was vaunted by many writers in the medical journals as a great panacea—as *the sovereign remedy* for ear-ache; but, naturally, disappointment followed quickly in the practice of these theorists, who seemed not to remember that the outer layer of the membrana tympani was not a mucous layer, else they failed to remember the fact that an aqueous solution of cocaine could be only sparingly absorbed through a cutaneous epithelium.

After the rupture or incision of the drum membrane in an acute catarrhal inflammation of the middle ear, when it becomes possible for the solution to reach the membrane involved, the call for relief from pain has already ceased. When it is practical to introduce a few drops of a strong solution into the middle ear cavity through the Eustachian tube, the pain is usually relieved at once; but as it is not always possible to do this on account of the swollen mouth of the tube, and as another question arises here beyond the scope of this paper, as to the advisability of the trial in any case, cocaine cannot be regarded as so great a panacea in ear ache as it was first claimed to be by many who wrote only upon faulty theoretical grounds.

I have occasionally heard of cocaine *habitués*, all of whom were physicians, but I have had no personal experience with these unfortunates. Such cases will be found to be linked with the whisky habit in the great majority of instances.

I think, however, that we should always remember the danger of such a consequence when making a prescription containing cocaine, and be guarded when even its suggestion arises.

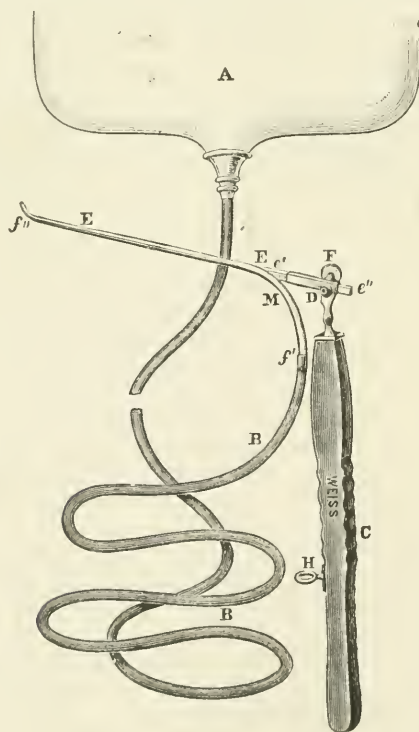
Like all drugs that are potent for good, cocaine is also potent for evil. Like fire, it is a good servant but a bad master.

A NEW INTRA-TYMPANIC SYRINGE.

By W. MILLIGAN, M.D.,

Assistant Surgeon to the Manchester Ear Institution.

THE importance of thoroughly cleansing the middle ear of all purulent secretion in cases of suppurative catarrh is admitted and insisted on by every aural surgeon. The difficulties of doing so are at times, however, very great. In those cases where the perforation is small or situated high up upon the surface of the drum-head, the ordinary practice of syringing along the external auditory meatus is quite ineffectual. Although by this means purulent secretion which has escaped from the middle ear into the



external auditory meatus is washed out, very little of the fluid passes through the perforation into the tympanic cavity to cleanse the surface of the diseased mucous membrane—the *fons et origo mali*. Washing out the middle ear by means of the Eustachian catheter is no doubt a reliable plan, but is unfortunately a method of procedure frequently resented by the patient. Intra-tympanic syringes for passing along the external auditory meatus and through the perforation have been designed by

Hartmann, Blake, Politzer, and Pritchard, and have been found of much service. In my hands, however, these syringes have proved somewhat difficult to manipulate, and have seemed to me, from the position in which they must necessarily be held, to partially obstruct the view.

The accompanying woodcut represents a form of intra-tympanic syringe made for me by Messrs. Weiss.

A is a small reservoir, which is suspended by means of a pulley arrangement attached to the wall in such a way that it can be raised or lowered according to will, and thus the pressure of the outflowing fluid regulated. B is a fine rubber tube, attached at one end to the reservoir, and at the other to the curved portion of the syringe (f'). C is the handle of the instrument. D is a rectangular socket with screw attached, and fixed to the handle C at the proper aural angle. E is the silver syringe. The portion of the syringe between e' and e'' is solid, and fits into the socket D, where it is kept fixed by the screw F. From f' to f'' the gradually tapering silver syringe runs. The rubber tubing from the reservoir runs through the eyelet H to become attached to the syringe at the point f' .

Method of using.—The syringe is held in such a way that the operator's right index finger lies in the curve of the instrument, viz., at the point M, and the little finger of the right hand against the handle, just below the eyelet H. By holding the instrument in this way the third or fourth finger of the right hand can be made to press upon the rubber tube, and so control the flow of the fluid. Under proper illumination the syringe is passed along the external auditory meatus through the perforation. By releasing the pressure of the third finger the fluid from the reservoir flows through the system of tubes, and so into the middle ear. In this way the operator not only sees exactly what he is doing, but, by raising or lowering the reservoir, is enabled to have a strong or weak incoming current according to the requirements of the case. In those cases where we have to deal with small perforations or where the perforation lies in Shrapnell's membrane, and where cholesteatomatous masses so frequently become locked up in the folds of the tympanic mucous membrane occupying this portion of the cavity of the middle ear, the instrument will, I trust, be found useful.

In the accompanying diagram the rubber tube should have been represented as passing through the ring H.

SPECIAL THROAT HOSPITALS.

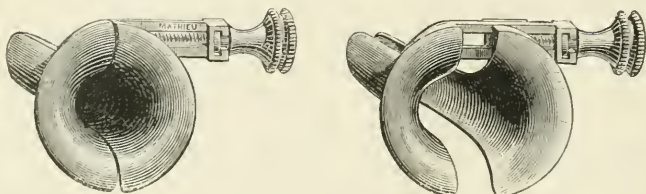
FROM the list of special hospitals given in our last issue, omission was inadvertently made of the Dublin Throat Hospital.

This hospital, which is situated in Hume Street, Dublin, has accommodation for 10 in-patients, and an annual attendance of 5000 out-patients.

The medical officers are—Sir Philip Smyly, Drs. Kendal Franks, F. A. Pope and J. D. Hillis. Assistant Surgeon, Dr. J. H. Scott. Dental Surgeon, Mr. A. W. Baker.

A NEW NASAL SPECULUM.

THE following illustration of the speculum devised by Dr. Moure, of



Bordeaux, will be understood by reference to the description of the instrument given in the October number of this Journal (page 503).

THERAPEUTICS, INSTRUMENTS, AND DIPHTHERIA.

Kahn (München).—*New Preparation of Myrrh.* "Münchener Med. Woch.," 1892, No. 31.

THE author has applied unguentum myrrhæ in nasal eczema, and myrrholin capsules in tuberculosis with good results. *Michael.*

Ziem (Danzig).—*External Application of Cantharadine in Diseases of the Nose and Throat.* "Monats. für Ohrenheilk.," 1892, No. 6.

THE author recommends the application of cantharadine plaster and collodium cantharadatum in cases of chronic purulent conditions.

Michael.

Scheppegrell, W.—*A simple Bottle Inhaler.* "Medical News," August 20, 1892.

THIS inhaler consists of a pint flask, closed by a rubber stopper having two perforations. Through one of the perforations is passed a funnel tube to within a quarter of an inch of the bottom of the flask. Into the other perforation is passed another glass tube, one extremity of which extends an inch into the flask, the other extremity being bent at an angle convenient for application. When in use the flask is filled one-third with water and the medicament is poured through the funnel tube in the proportion required. The patient then inhales through the bent glass tube. When it is desired that the mucous membrane of the nose and naso-pharynx should also be treated, a rubber tube with nose-piece may be attached to the glass tube, and the inhalations made through the nostril to which the nose piece of the inhaler is applied. The inhaler is made by Messrs Eimer & Amend, of New York.

W. Milligan.

Clasen (Hamburg).—*Electrolytic Operations in Medical Practice.* "Deutsche Med. Zeit.," 1892, No. 93.

DESCRIPTION and illustration of the apparatus. Must be seen in the original. *Michael.*

Dunn, John.—*A Modified Hartmann's Snare.* "Med. Record," Sept. 24, 1892.

IN this modification the canula is made perfectly flat in its whole length so that it resembles a very narrow knife-blade; its width is three millimètres; its antero-posterior diameter only three-quarters millimètre, so that the opening at the end is just large enough to admit easily a No. 3 piano wire. The distal end of the canula has a knife edge. The handle of the instrument is made after the German plan, and has a revolving ring at the end. The canulæ (of which there are several forms for aural and nasal operations) fit the handle at an angle of forty-five degrees. The instrument is made by Messrs. Bartlett, Garvens & Co., of Richmond, Va.

W. Milligan.

Munger, Carl.—*A Modified Gottstein's Curette.* "Med. Record," Sept. 3, 1892.

THE modification as suggested by the author is to have the distal portion of the ring heart-shaped instead of being slightly convex or flat, as has hitherto been the usual form. The advantage claimed for this modification is that the curette can be made to straddle the posterior edge of the nasal septum, and by so doing allow the two wings of the heart to reach into the choanæ. In this way the curette can be brought further forward and the space more thoroughly cleared than by any other form of ring knife. The instrument is made by Meyrowitz Bros., New York.

W. Milligan.

Sedziak, John.—*Some Remarks on the Application of the Galvano-Cautery to Diseases of the Nose, Throat, Larynx, and Ears.* "Kronika Lekarska," 1892, Nos. 5 and 6.

IN the above paper the author, basing his views upon his own rich material, and upon almost all papers on the subject published in different languages, shows the great significance of the galvano-cautery in diseases of the upper air-passages. After a short historical introduction the author proceeds to consider the application of the galvano-cautery to the nose. Hypertrophies of the turbinated bodies present the first and most important indication for this method, which is absolutely superior to any other method. The author, who in general is a great supporter of galvano-cautery treatment, very often applied it in this disorder, using the snare in cases of so-called polypi of the inferior and middle turbinateds, and the cautery to produce furrows. The author, further, gives the details of the application of the galvano-cautery for nasal polypi, showing the superiority of the galvano-caustic method over the cold snare—(1) It prevents relapses; (2) it causes less bleeding; (3) it is less painful. After having shortly mentioned all the pathological processes in the nasal cavities (epistaxis, etc.) where the galvano-cautery finds an application, he proceeds to consider its use in diseases of the naso-pharynx. First he describes galvano-caustic operations upon the posterior ends of the inferior and middle turbinateds, which he operates upon only by means of the cautery snare, or oftener by sharp cauterization, producing deep punctures only, under the guidance of the laryngoscopic mirror (the

smallest). He destroys growths (polypi, fibromata, sarcomata) of the naso-pharynx only by means of the cautery snare and cauterization. The author also deals with the galvano-cautery in the oral and pharyngeal cavities. Hypertrophy of the tonsils (faucial), especially in adults, where we fear serious bleedings, is best operated upon by means of the hot snare. This he adopted in some twenty cases, and was always very satisfied with the result. Further, in cases of pharyngitis granulosa and pharyngitis lateralis this method proved to be the best. The author further indicates shortly other diseases of the cavities where the galvano-cautery can be more or less satisfactorily applied (growths, diphtheria, etc.). He then describes galvano-caustic operations in laryngeal diseases, and expresses his astonishment that this method does not find such great application as it deserves. He is of opinion that the fear of acute œdema of the larynx is absolutely without grounds. The pathological processes which indicate this method are growths of the larynx (benign and malignant), but principally tuberculosis of the larynx, where the author voluntarily applies this method (*per se*, or after curettement), especially in cases of infiltrations, ulcers, and growths—in this latter case using the hot snare—of the posterior part of the larynx, and of the ventricular bands and epiglottis. The author also deals with the application of the galvano-cautery to diseases of the ear—namely, in cases of polypi and granulations of the mucous membrane of the tympanic cavity. He concludes his very long paper with some remarks upon galvano-caustic batteries and a description of their appliances, illustrating his opinions with numerous observations derived from his own practice.

John Sedziak.

Ashby (Manchester).—*Loeffler's Diphtheria Bacillus*. "Brit. Med. Journ.," Feb. 6, 1892.

A READY method is to detach a piece of membrane, place it for five minutes in a twenty per cent. solution of boracic acid, and then draw it along the free surface of sterilized blood serum in a test tube, which is maintained at a temperature of 37° C. for from twelve to twenty-four hours, when small round colonies of the culture are visible, and are to be stained in carbol-fuchsin. [The bacillus is not found in the membranous sore throat of scarlet fever.]

Wm. Robertson.

Booker, W. D.—*The Relation of Pseudo-Diphtheritic Angina to Diphtheria, with Special Reference to Scarlatinal Pseudo-Membranous Angina*. "Arch. of Pediatrics," Sept., 1892.

LAST winter an epidemic of scarlatina prevailed in Baltimore, with frequent pseudo-membranous angina, resembling diphtheria so greatly as to make diagnosis impossible. The author instituted comparative study of the bacteria found in scarlatinal angina with those found in true diphtheria.

At the time of this epidemic of scarlatina an epidemic of influenza was at its height in the city, and a physician attending scarlatinal patients, and a man over sixty living in the same house with a child having scarlatina, were taken with influenza, and had throat affections similar to that of the scarlatinal patients. Diphtheria was not prevalent in the city.

The Loeffler bacillus was not found in any of the cases of pseudo-diphtheritic angina. Streptococci were found in all of the cases in predominating numbers, staphylococcus aureus occurred in eleven cases of scarlatina and three cases of measles, and staphylococcus albus in four cases of scarlatina. The staphylococci appeared in mild as well as serious cases, and the streptococci appeared as two leading types, but whether different varieties is uncertain, and this variation had nothing to do apparently with the severity of the disease.

KURTH has lately differentiated a form of streptococcus conglomeratus which he considers pathogenic of serious forms of scarlatinal throat, and the author's results lead to the probability of a form of streptococcus associated with the severer cases.

Examination of the cases of pseudo-membranous throat of three cases of measles showed their resemblance to scarlatinal throat, and that they were of non-diphtheritic origin.

The author's conclusions are that the pseudo-membranous affections of the throat in scarlatina and measles, presenting the clinical features of diphtheria, differ from the latter in nature and etiology. Clinical appearances are not sufficient to differentiate them from diphtheria. The anatomical changes, except the pseudo-membrane, resulting from the effects of the bacillus diphtheriæ are not occasioned by direct action of the bacilli, which do not invade the body, but by toxins. The changes are focal necrosis of tissue, with peculiar splitting of the nuclei of cells. The anatomical changes resulting from scarlatinal diphtheria are accompanied by invasion of the body with streptococci, and are largely suppurative processes, the effect of these organisms.

Both measles and scarlatina render the tissues especially vulnerable to the diphtheritic bacillus, and complications of these diseases with diphtheria are not uncommon. The streptococci of pseudo-diphtheritic angina do not differ from other known forms of streptococci, but different varieties may occur in different cases, and certain varieties may be associated with the more serious cases.

R. Norris Wolfenden.

Koplik, H. (New York).—*Forms of Diphtheria which simulate simple Angina.*
"Arch. of Pediatrics," Sept., 1892.

IN the author's studies upon diphtheria of the tonsils, pharynx, and larynx, conducted in the Carnegie laboratory, he, amongst other things, directed his attention to an immense mass of cases of daily occurrence, the so-called doubtful cases, where from a clinical standpoint the most skilful physicians may differ. The more such patients are examined the less decided we become as to their malady. The author's studies include thirty-four such cases. Various diagnoses had been made.

The first series of cases to which attention is called begin suddenly with symptoms of laryngeal involvement. There may have been previously an apparently benign amygdalitis with no membrane. Suddenly stridulous cough and breathing and rise of temperature occur. There is no membrane, and the patient recovers. These cases are similar to those published by Roux. These cases may infect others, no membrane may appear, and

recovery may occur; and other cases may be subsequently infected, showing membrane, and dying of diphtheria.

Another series of cases are those which may be treated for days as simple amygdalitis, no membrane being visible. Suddenly croupy cough and stridulous breathing occur, and one or two specks of membrane are found on the tonsil and pharynx. Death may follow with laryngeal stenosis in twenty-four hours. In cases mentioned by the author the bacillus of Loeffler was found.

Another series of cases is mentioned, in which there was cough and sore throat, swollen tonsils, and reddened pharynx, but no membrane or gland swellings. Three children were attacked consecutively, in the last of whom only streptococci were found.

Another set of cases is where there is swelling of the tonsils, with or without glandular enlargement, and a single speck of varying colour on one or the other tonsil. Some of these cases are true diphtheria; in others only streptococci are found. The diagnosis of these specks on the tonsil can only be bacteriological.

Follicular appearances on one tonsil may be accompanied by true diphtheria and a small patch of membrane on the other side.

Cases where there is ulceration and necrosis of tissue may be difficult of diagnosis. A coating of yellow exudate or specks of it may exist, in which Loeffler's bacilli are found. In others there is nothing but streptococci, and the cases resemble a simple tonsillitis. Gerhardts has drawn attention to abortive cases in which no exudation is present.

The Loeffler bacillus has been found on the inflamed pharyngeal mucous membrane which became coated with fibrinous membrane, but at no time was there a picture of diphtheria.

The presence of membrane is not at all pathognomic of diphtheria (Baginsky, Hoffmann, Escherich, Prudden, Welch, etc.).

Such cases as are mentioned in this paper are very puzzling in diagnosis. Clinical symptoms are not distinctive, and the only test is examination of the exudates.

We can, however, isolate all cases which appear unfavourable.

R. Norris Wolfenden.

Smith, J. Lewis (New York).—*The Two Forms of Diphtheria sometimes designated True Diphtheria and Pseudo-Diphtheria—their Differences and Nature.* "Arch. of Pediatrics," Sept., 1892.

1. *Diphtheria caused by the Klebs-Loeffler Bacillus, sometimes designated True Diphtheria.* The poisonous action of the bacillus is due to the toxins secreted or formed by it, as clearly demonstrated by modern research. The bacillus has remarkable vitality and power of propagation, thrives in filth and is carried in sewer gas. Diphtheria is largely disseminated by children who, having slight attacks themselves, mingle with others. More stringent precautions towards prevention should be exerted. It is possible that cocci, developed during the attack in the pseudo-membrane, aggravate the diphtheria.

2. *The Klebs-Loeffler Bacillus in Healthy Persons.* A bacillus morphologically identical with this has been found in healthy mouths, in benign

diphtheria and in persons recently cured of diphtheria. It cannot be transformed into the genuine diphtheria bacillus, though Roux and Yersin believe this transformation to be possible.

3. *Diphtheria caused by Cocci, sometimes designated Pseudo-Diphtheria.* Baginsky obtained a pure culture of the Loeffler bacillus in 118 out of 154 cases of diphtheria examined by him. In the remaining thirty-six cases only cocci were found, and thirty-two of them recovered in a few days without complication. Four died—two with empyema, one with pneumonia and measles, and the other had severe paralysis. The milder form of the disease is, according to Baginsky, caused by the staphylococcus and streptococcus. Paralysis is not liable to occur after these cases. Both forms of inflammation (the Loeffler bacillus and the coccus) are accompanied by fever, swelling of lymphatics, and prostration.

In twenty-four cases of supposed diphtheria Prudden found no trace of the Loeffler bacillus, but the streptococcus was the most common, and in others the staphylococcus pyogenes aureus or albus was also met with. It bore no relation to the extent of the pseudo-membrane, and had a closer relation to the catarrhal than the pseudo-membranous inflammation. Nearly all these cases, however, had recently had scarlatina or measles.

Martin (Ann. de l'Inst. Pasteur, May, 1892) analysed two hundred cases supposed to be diphtheritic. In seventy-two cases (of which twenty-nine were croupous) the Loeffler bacillus was absent. Exposure to scarlatina and measles had occurred in some of these cases. The mortality was largest in cases of true diphtheria, *i.e.*, when the Klebs-Loeffler bacillus is present.

A pseudo-membranous inflammation appears possible when only cocci are present, when no toxine like that produced by the true Loeffler bacillus exists.

It is difficult to make a differential diagnosis of scarlatinal necrosis from diphtheria. It is commonly considered in Paris to be diphtheritic, but should, according to Sevestre, be distinguished from this. Henoch, Wurtz, and Bourges regarded the scarlatinal necrosis as due to the intensity of the inflammation. When it is truly diphtheritic it occurs late in scarlet fever. The streptococcus, the supposed agent of pseudo-diphtheria, is present in scarlatinal necrosis, and the Loeffler bacillus is found in some cases, but apparently only a small proportion.

R. Norris Wolfenden.

MOUTH, TONGUE, PHARYNX, &c.

Thornbury (Buffalo).—*The Bacteria of the Mouth—of interest to Dentists and others.* "Buffalo Med. and Surg. Journ.," July, 1892.

THE author mentions that leptothrix innominata is the direct cause of many diseases of the buccal cavity, and has been known to penetrate the lungs, stomach, and other structures. It occurs in long, thin threads, and is found in soft, white deposits on the teeth in every mouth. It stains

readily with iodine and iodide of potassium. Several other bacilli and fungi are also described. The substances that may be a nidus for these germs are the normal saliva, the buccal mucus, dead epithelium, dental tissue softened by acids, exposed pulp, tartar and exudations on the gums, accumulations of food.

Several "pathogenic bacteria" have been isolated, and are said to be capable of producing disease in lung, peritoneum, and other parts when inoculated. Human saliva possesses energetic toxic properties, and will kill small animals speedily when injected.

B. J. Baron.

Elliott.—*Some Observations upon the Mouth and Teeth during Pregnancy.* "The Birmingham Med. Rev.," July, 1892.

1. The condition of the gums. Their margins in some cases are thin, pale, and somewhat shrivelled in appearance, and apparently withdrawn from the necks of the teeth; in other cases they are separated from their attachments to the neck of the teeth, and a thin fluid will ooze on pressing them. This is alleged to be due to impeded circulation.

2. The secretions. The changes in these are said to be a potent cause of caries. Salivation is often considerable, and may cease at the third or fourth month. This saliva is acid, ptyalin is absent, and both its organic and inorganic constituents are lessened in amount.

3. Caries. "Brown" caries and "white" caries (the latter associated with anæmic gum) are seen. The teeth may become soft without decay, get sensitive to touch, heat, and cold, and are loose in their sockets from absorption of the alveolus. The periodontal membrane is anæmic. Pain is often reflex in pregnant women, and must not be ascribed to hysteria.

B. J. Baron.

Ritter (Berlin).—*On Syphilitic Affections of the Mouth and Syphilitic Infections from Operations in the Mouth and Teeth.* "Deutsche Monats. Zahnheilk.," 1892, Nos. 2 and 3.

DESCRIPTION of the syphilitic primary affections of the mouth written for dentists, for whom the knowledge of these affections is of great importance, in consequence of the ease with which specific affections can be propagated by instruments.

Michael.

Paget, Stephen (London).—*Malformations of the Lower Lip.* "Lancet," Aug. 27, 1892.

1. *Median Cleft.* In one (Hamilton's) case the fissure differed from median hare-lip of the upper lip in not presenting the tubercles usually present in that rare condition. In another (Bland Sutton's) there was a dermoid growth between the edges.

2. *Hypertrophy.* (A) Of the mucous membrane only is generally a long fold enclosing glands, behind the true lip. (B) Of the whole lip is very rare.

3. *Sinuses.* In Trelat's case there were sinuses on each side of the middle line, in Arbuthnot Lane's two slits on the front of the lower lip, leading into two sacculi under the mucous membrane on the inner aspect. (Both these patients had hare-lip.) Jardine Murray's case presented two crescentic openings near the free edge, admitting a large

probe for half an inch. (The father had double hare-lip, and other members of the family were malformed.) Dépaül, Madeluny, and Demarquay reported similar cases. Mr. Paget attributes them to up-growths on the lower lip, fitting originally into the clefts in the upper one, and subsequently persisting or retracting, and remaining as papillæ lying in pits, or, finally, by the same process carried still further, forming sinuses. Analogously along the lines of the branchial clefts one case may present an outgrowth, another a sinus, or a mere pit in the skin.

Dundas Grant.

Altmann (Kopercynce).—*Soor in a Woman Sixty years old.* "Internat. Klin. Rundschau," 1892, No. 34.

THE patient had a soor following upon croupous pneumonia. The affection lasted eight days, and was cured by brushing with sublimate.

Michael.

Garrigues, H. J. (New York).—*Stomatitis due to the Irritation of Epithelial Pearls in the Mouths of New-born Children.* "Med. News," Oct. 1, 1892.

AN epidemic of sore mouths occurred in the children at the Maternity Hospital last spring. Two typical cases are detailed. In one, a white spot appeared on the second day after birth at the junction of the soft and hard palate. In three days it covered the palate. There was a superficial ulcer covered with yellow film, and bounded by a red line; it was symmetrical, there was no fever and no diphtheria. It was a local infection cured with acetic acid and borax in glycerine. The second case, immediately after birth, presented a white spot at the junction of the right tonsil and palate over the situation of the hamular process, which is likely to become the seat of ulceration (Bednar's aphthæ). A triangular ulceration of the left side of the palate and palatine arches afterwards appeared, without fever or enlarged glands. A similar spot formed on the right side on the seventh day. On the twenty-third day the mouth was nearly healed.

Fifty-two babies were examined, and nearly all had one or more white nodules on the palate at birth. The first twenty-seven of these children had their mouths washed out immediately after birth, and after each nursing with a saturated solution of boric acid. Twelve of these had sore mouths. The last twenty-five had no washing out, only the mother's nipple and milk entering the mouth, and not one of these babies had sore mouth.

The pearls were found in all of the fifty-two but three. They are small white globules of the size of a pin's head or millet seed, situated in the raphe and preferably at the junction of the hard and soft palate. There are from one to five; the outer side is hard, the inner soft. They are embedded in the mucous membrane, even reaching the periosteum. Most have a connective tissue covering, and some form a white line along the raphe. Microscopically they are masses of epithelial cells, the outer layers being the most recent. Such pearls are also found on the alveolar process, especially near the posterior extremity.

Some authors have thought them to be retention cysts, but Epstein

proved them not to have anything to do with glands. They occur as early as the eighth week of foetal life. They are transient, and disappear at the end of the second month. They may be found a whole year in children, but after the fifth month are found embedded in the mucous membrane. They are due to an invagination of the epithelium. The author found in his cases that if the pearls did not give rise to stomatitis they disappeared within a week or two.

They are diagnosed by their definite locality and regular globular shape. Bednar's ulcer always develops laterally, generally bilaterally, over the hamular process. They do not call for treatment, but should not be injured. If they are mistaken for "sprue" (which forms irregular less elevated white spots, never congenital, and found in any part of the buccal membrane, and not symmetrically), and rubbed off, mischief follows. If foreign matter is in the mouth of the child (liq. amnii, blood, etc.), it may be washed with plain water, and very superficially.

Water acidulated with acetic acid, followed by painting with one part of borax in eight of glycerine, is the best treatment for stomatitis.

R. Norris Wolfenden.

Killian (Worms).—*Diagnosis of Certain Early Forms of Pemphigus Mucosæ.*

"Monats. für Ohrenheilk.," 1892, No. 6.

IN a patient, thirty-three years old, affected with difficulty in speaking and swallowing, the author remarked a white exudation on one spot of the tongue and on the under lip. Some time later universal pemphigus appeared. The author believes that it is possible to recognize this disease quite early, and before any eruption on the skin arises, because the first symptoms of the disease are often localized on the mucous membranes.

Michael.

Hahn (Pyriz).—*On Möller's Glossitis Superficialis.* "Deutsche Med. Zeit.," 1892, No. 65.

A PATIENT, twenty-five years old, for one and a half years had pains in the tongue. The arcus palato-glossus and the papillæ circumvallatæ were red, the vessels injected, the papillæ swollen. One spot of the tongue was more red than normal. The pharynx was inflamed. Improvement followed by brushing with menthol.

Michael.

Heymann, Paul.—*Symptomatology of Tuberculosis.* "Berliner Med. Gesellschaft," Feb. 17, 1892.

DEMONSTRATION of a patient affected with tuberculous ulcers of the mucous membrane of the mouth.

Michael.

Morrison, Rutherford (Newcastle-on-Tyne).—*Ichthyosis of Tongue, etc.* "Brit. Med. Journ.," Feb. 20, 1892.

A MAN, aged seventy-three, had ichthyosis of the tongue for fifteen years, and for fifteen months suffered from pain and salivation. Recently a tender, indurated nodule, evidently of a malignant nature, had appeared. Under the same date comes another interesting tongue case, reported by Mr. Barling (Birmingham), in a man, aged forty-five, an epileptic, who

had bitten his tongue frequently, giving rise to an ulcer, one inch by one inch, with hard margins, which, however, showed no epithelial ingrowth. Iodide of potassium in large doses producing no effect, and the posterior sterno-mastoid glands becoming full, the half of the tongue was excised. The microscope showed thickening of the epithelium only, which was supposed to indicate a pre-cancerous state. *Wm. Robertson.*

Tilnig.—*A Calculus of the Submaxillary Gland.* Deutscher Aerztlicher Verein zu St. Petersburg. Meeting, Dec. 16, 1892.

THE patient suddenly presented a swelling of the region of the lower jaw. By pressure the author removed through the ductus Whartonianus a quantity of pus, to which followed a stone of the length of three centimètres. In the stone a hair was included.

Dr. SELENKOW also showed some stones removed from the submaxillary gland. In the centre of the concrement were masses of leptothrix.

Michael.

Thorington, J.—*A Calculus in Wharton's Duct.* "Med. News," Aug. 13, 1892.

THERE was a prominence on the floor of the mouth, a small whitish opening, probing which a hard grating body could be found; a hard elongated tumour could be felt under the left side of the jaw. Through an incision the calculus was removed by forceps, the cavity was cleansed with a ten volume solution of peroxide of hydrogen, and swabbed out with iodide of potash and iodine in glycerine and water. The surface of the calculus was rough, and it weighed twenty-one grains, consisting of carbonate and phosphate of lime. A point of interest in the case was a history of sudden onset, suggesting the strong probability of the nucleus of the calculus originating in the submaxillary gland, and not in the duct, to which it was washed forward by the salivary secretion.

R. Norris Wolfenden.

Newcomb, J. E. (New York).—*Syphilis of the Lingual Tonsil.* "Med. News," July 2, 1892.

THE tonsil is often the seat of secondary trouble, more rarely of gumma, with subsequent breaking down. It is more common in men addicted to tobacco and alcohol or to prolonged straining of the voice. The condition is often overlooked. There is the feeling of a foreign body and some dysphagia, and the appearances described by Moure and Raulin as typical, viz., (1) nipple-shaped, frayed protuberances, separated by furrows, ulcerated on the summits, and presenting a typical plaque clearly differentiated from the surroundings; (2) a median or lateral single protuberance, covered with mucous plaques and ulcerated, the mass being large and the tissues between the follicles infiltrated. A patient presented lesions of the first variety, notes of whose case are given.

Tertiary lesions are, according to Natier, more uncommon. Snow-white deposits with zones of intense redness occur along the base of the tongue in patients under inunction treatment, according to Schumacher, with cervical and submaxillary gland swellings. In gumma there is an

indurated edge with cone-shaped ulcer in the centre. Carcinoma, chronic abscess, and diphtheria may be attended with radiating pains as in lingual amygdalitis.

R. Norris Wolfenden.

Thorner (Cincinnati).—*Soor of the Nose and Pharynx of an Adult*. "New York Med. Monats.," 1892.

In a patient, seventeen years old, the author saw this affection following upon influenza. Treatment with soda bicarbonate. Cure. *Michael.*

Hall, Haviland (London).—*Erysipelas of the Pharynx and Larynx*. "Brit. Med. Journ.," Feb. 27, 1892.

IN an interesting and exhaustive paper on the above subject, in which the opinions of Ryland, of Birmingham (1837), Massei, Moritz Schmidt, Gerhardt, etc., are duly considered, the author details illustrative cases (three private, fatal; three hospital, recovery) where in some the general symptoms were most prominent, in others the local; high pyrexia and a sudden onset being characteristic. The rapid development, tendency to wander, in the course of lymphatics especially, the fever, and the discovery (Cardone) of the streptococcus of Fehleisen all go to confirm the true character of the disease, and which may have for its starting-point small epithelial lesions (Massei and Gerhardt) at the base of the tongue or over the tonsils, from which the cocci (erysipelas) may spread from within outwards by various paths, or internally as here. As in external erysipelas we have two forms, cutaneous and phlegmonous, so, according to Semon, there may be varying degrees of severity in the affection thus developed internally—erysipelas, phlegmonous pharyngitis, angina Ludovici being only modifications of the same process, only varying in the degree of their severity. The prognosis is often grave, and the onset sudden in pronounced cases. The treatment adopted by the author comprehends the use of ice externally and internally, along with cocaine twenty per cent. solution to larynx. If no progress is noticed, scarification of oedematous tissue is indicated. Strong mustard plasters to the back have given in some hands good results, as also has croton oil to the front of the neck. Tracheotomy is spoken of with caution as temporarily remedial only. *Wm. Robertson.*

Beck (New York).—*Foreign Body in the Œsophagus*. "New York Med. Woch.," 1892, No. 4.

A GIRL, eighteen years old, swallowed a quarter-dollar piece. Extraction by the "Münzenfänger," with some remarks on the different methods of operation for the foreign bodies. *Michael.*

Morrison, A. C. (Hartlepool).—*Œsophageal Stricture—Gastrostomy*. "Brit. Med. Journ.," Feb. 6, 1892.

A MAN, aged fifty, had gastrostomy complete, October 24th; December 21st he had gained two stones in weight; died from influenza. Specimen showed malignant stricture closing entirely the cardiac orifice.

Wm. Robertson.

NOSE AND NASO-PHARYNX.

Davidsohn (Berlin).—*Electric Illumination of the Bones of the Face, a sure method for the Diagnosis of Empyema Antri Highmori, with special regard to the size of the Hard Palate.* "Berliner Klin. Woch.," 1892, Nos. 27, 28.

THE author has applied the method in some cases and is satisfied with his results.
Michael.

Ziem (Danzig).—*Illumination of the Bones of the Face,* "Berliner Klin. Woch.," 1892, No. 33.

POLEMICAL article.

Michael.

Lange, V. (Copenhagen).—*Congenital Occlusion of the Right Choana; Galvano-caustic Operation. Death six days after the operation.* "Deutsche Med. Woch.," 1892, No. 29.

IN a patient, nineteen years old, the right choana was occluded in the middle by a yellowish-coloured septum. This was perforated by the galvano-cautery during chloroform narcosis. The air passed freely through the nose. The same evening the patient was attacked with headache, and became feverish. During the next day meningeal symptoms appeared. Death followed. No *post-mortem* examination was obtained. The author believes that there was a sinus thrombosis.
Michael.

Ziem (Danzig).—*On Palpation of the Upper and Lower Naso-Pharynx and the Larynx.* "Therap. Monats.," August, 1892.

RECOMMENDATION of the method, with the remark that it often gives better results than laryngoscopy in children and than rhinoscopy in adults.
Michael.

Roaldes.—*Adenoid Growths of the Naso-Pharynx and their Treatment.* "New Orleans Med. and Surg. Journ.," Aug., 1892.

THIS is a carefully prepared and illustrated paper, but nothing new is suggested.
B. J. Baron.

Lloyd, Jordan (Birmingham). — *Naso-Pharyngeal Polypus.* "Brit. Med. Journ.," Feb. 20, 1892.

THE author showed a large fibro-myxomatous tumour (nasopharyngeal polypus) removed from a boy, aged seventeen, by splitting the upper lip and nose to the left of the middle line to the bone. The polypus was found attached to the left side of the roof of the pharynx, and detached by a stout raspatory. The growth had the character of a myxo-fibroma.

Wm. Robertson.

LARYNX, &c.

Hajek (Wien). — *Laryngo-Rhinological Communications*. "Internat. Klin. Rundschau," 1892, Nos. 31, 32, 33, 34, 35, 38, and 40.

1. In a boy, twelve years old, a tumour was found to arise from the base of the tongue. The length of the tumour was two and a half centimètres, and it was of the same colour as the tongue, and covered with papillæ fungiformes. It was extirpated. Microscopical examination showed that it had all the histological characters of the tongue, viz., muscles, mucous membrane, and papillæ.

2. Tuberculous infiltration in the posterior regions, and multiple noduli in the anterior part of the tongue. Tuberculosis of the tongue combined with tuberculosis of the larynx and the lungs.

3. Tuberculosis of the gum observed in a phthisical girl, seventeen years old.

4. Sarcoma of the soft palate, simulating a peritonsillar abscess. The tumour seemed to present fluctuation. Incision was followed by severe bleeding. Some time later there was increase of the tumour, and death followed. Microscopical examination showed that it was a round-celled sarcoma.

5. In four cases the author observed symmetrical congenital defects in the arcus palati. By the absence of cicatricial tissue syphilis could be excluded.

6. In four cases accessory tonsils were observed, situated on or near the tonsils.

7. Bursitis and diffuse catarrh of the naso-pharyngeal space. Different variations of this disease have often been observed by the author.

8. Scrofulous ulcers of the pharynx have been sometimes observed; they are similar to tertiary syphilitic affection or hereditary lues, but can be distinguished from these by the failure of specific treatment. By curetting, followed by application of lactic acid, they are sometimes cured.

9. The author has operated in five cases of total adhesion of the soft palate to the posterior pharyngeal wall in the following manner:—After cocaineization of the pharynx and retro-pharyngeal space a curved probe is introduced through the nose down to the adhesion. By subsequent extension of the wound by a uvula hook and tampons of iodoform gauze, it is possible to remove the soft palate from the posterior wall without any loss of substance. By applying rubber plates recurrence is prevented; but for a long time afterwards the palate must be extended with the uvula hook.

10. Inflammation of a retro-pharyngeal struma was observed in one case, and cured.

11. Operations for deviations of the nasal septum were performed in twenty-five cases. In cases of circumscribed deviation of the cartilaginous septum, the author cut off the protruding piece. He has never seen that

the defect made by this operation caused any damage to the form of the nose, and therefore all complicated methods serve no purpose. In cases in which the deformed piece was too large to cut out, the author circumcised the whole cartilaginous septum; then he could dislocate it, and put it in the right position. He applies the instruments which are recommended by Jurasz.

12. Rhinolith. A stone, 2·7 centimètres long and 2 centimètres broad, was removed from the nose of a patient forty-two years old. It seemed to have been in its place twenty years, and had produced a perforation of the septum and atrophy of the turbinated of the diseased side.

13. Tuberculosis of the nose. Some cases have been treated with the best results by scraping and application of lactic acid.

14. *Ulcus perforans septi narium.* In cases of bleeding of the nose lasting a long time sometimes a defect of the septum arose, and a careful anamnesis of such cases nearly always demonstrated that bleeding had arisen there. The author has observed a patient who has had pruritus of the septum since youth. By scratching with the finger he always removed a crust. Suddenly he remarked a deflection in the septum.

Michael.

Spohr.—*Five Cases of Laryngeal Tumour.* "Journ. of Ophthalmol. and Laryngol.," July, 1892.

Two of these cases were ordinary papilloma of the vocal cords, which were successfully removed with Schrötter's forceps. A third was an example of local hypertrophy of mucous membrane, accompanied by general congestion, and was cured by insufflations of chloride of zinc. A fourth was a case of chondritis nodosum, which was treated by means of the solid stick of nitrate of silver applied to the elevations, which, along with general tonics, was successful. The author thinks that faulty and impeded abdominal breathing from constricted waist has much to do with the production of this laryngeal trouble. The last case was one of fibroma laryngis, following "la grippe." A cold wire snare was used to remove some of this, and the remaining portion was torn away with forceps. A few fragments still left are being treated with the solid caustic stick.

B. J. Baron.

Solis-Cohen.—*Laryngectomy.* "New Orleans Med. and Surg. Journ.," Aug., 1892.

THE man on whom this operation had been performed was shown to the members of the Philadelphia County Medical Society.

Nineteen years ago Lefferts removed a large papilloma of the larynx. For ten years the patient was quite comfortable. Then for several years various methods of treatment were tried, but without avail. Early in this year he was tracheotomized as dyspnœa was so urgent, and on a piece of the growth being removed and examined microscopically it was found to be sarcoma. Thyrotomy was then done, and the growth scraped away from the larynx. Rapid recurrence ensued, and laryngectomy was decided on. The previous operations, which led to cicatrization, caused some difficulty. A Trendelenburg canula was used, and a piece of ordinary sponge was moistened and secured around the canula, and over this was

tied a bulbous india-rubber tube, which answered admirably. The œsophagus was stripped from the tips of the arytenoid cartilages and larynx down to the base of the first ring of the trachea without perforating it. After the operation he was constantly watched for eighty hours, and twice during that time his life was saved by removing mucus from the tracheotomy tube. The œsophagus opens to receive water, and the case shows that it is physiologically correct to state that the lungs exhale moisture, since this man breathes exclusively through his tracheal tube, and yet his expired air is wet. The author does not think that this is an instance of the conversion of a benign into a malignant growth, but that the latter merely grew from the site of the former benign growth.

B. J. Baron.

Mules, P. H. (Bowdon).—*Thyrotomy in Childhood for the Removal of Laryngeal Growths.* "Brit. Med. Journ.," Feb. 27, 1892.

THE author recommends this step only where it is found impossible to effect removal intra-laryngeally. In his case, a delicate female child aged four, tracheotomy was performed some weeks previously. The child was anesthetized through the tube, the thyroid split along with two rings of tracheæ, and twenty-five separate papillomata removed (with cutting forceps), which had completely blocked the larynx. The child was running about on the tenth day.

Wm. Robertson.

Kausch (München).—*On Pachydermia Laryngis.* "Münchener Med. Woch.," 1892, Nos. 29 and 30.

A REPORT of twenty-one cases of this disease; three times it was combined with tuberculosis.

Michael.

Robertson, W. (Newcastle).—*Laryngeal Paralysis in Infants.* "Lancet," Sept. 10, 1892.

THE condition in question is a state of persistent dyspnœa lasting over a considerable period and exclusively affecting inspiration. The dyspnœa, mild at first, increases to a state of dangerous asphyxia. The voice and cough were normal, and from this, coupled with the duration of the disease (many months), and the gradual deepening of the symptoms, Dr. Robertson excluded spasm of the adductors and papilloma. He attributes the symptoms to a temporary bilateral abductor paralysis. There was a granular condition of the pharyngeal and post-nasal mucous membrane, and he considered it "justifiable to suppose that irritation set up in these regions is transmitted to the medulla, there exciting and exhausting the accessory nucleus, and that this leads up to impaired nervous energy to the abductors." Unfortunately, no laryngoscopic examination was possible. The treatment found efficacious included the administration of bromide of ammonium, tepid sponging, a nasal alkaline spray, the instillation of a two per cent. solution of resorcin in mineral oil into the nose, the scraping away of the post-nasal granulations, and, in severe cases, occasional intubation of the larynx. [The success in the six cases described as following the treatment—especially that directed to the post-nasum—will impress even those who may not interpret the symptoms

and the results of treatment in quite the same way as our esteemed collaborator.]

Dundas Grant.

Holz, Benno (Berlin).—*View of the Larynx in a Case of Traumatic Neurosis.* "Berliner Klin. Woch.," 1892, No. 33.

THE patient, afflicted with "railway spine," became aphonic a short time after the accident. Laryngoscopically was seen pachydermia of the free edge of the right vocal cord. During respiration both vocal cords were arcuated, and the arytenoid cartilages made trembling motions. During phonation the processus arytenoidei touched one another, but vocal cords remained arcuated. Diagnosis: paresis of the thyro-arytenoid muscles and atonia glottidis.

In another patient, also affected with traumatic neurosis, the author stated atonia glottidis and a paresis of the postici. This symptom cannot be simulated.

Michael.

Newcomb, J. E. (New York).—*Notes on a Case of Laryngeal Vertigo.* "New York Med. Journ." Sept. 10, 1892.

THE patient was a man of forty, short and thick-set, of neurotic temperament, who suddenly took cold and became hoarse, having also a spasmodic cough, coming on every half-hour, causing great headache and pain in the side. Discharge of thick yellow mucus terminates the cough. There was catarrh of the nose and pharynx. Examination of the larynx produced violent spasmodic cough, and momentary apnoea, the spasm relaxing with the discharge of thick yellow mucus. Fifteen grains of bromide of potassium, and a sedative cough medicine, were given three times a day. The cough increased, causing a sub-conjunctival hæmorrhage. This continued six weeks and the frequency of the cough diminished, but was followed by general clonic spasm of all the muscles, uncontrollable by the patient, and momentary unconsciousness, and the patient became "blue in the face," and fell down unless supported. There was no preceding dizziness and subsequent drowsiness or mental confusion. These lasted a month, and were finally cured. A little thickening and congestion of the cords was left, with normal incursion. The results of treatment were apparently negative, the attacks subsiding of their own accord.

R. Norris Wolfenden.

Betz (Heilbronn).—*Etiology and Therapy of Laryngeal Edema.* "Allgem. Wiener Med. Zeit.," 1892, No. 34.

RECOMMENDATION of injection of pilocarpin.

Michael.

Kraus, Eugen (Paris).—*Tuberculous Laryngeal Stenoses and their Treatment.* "Allgem. Wiener Med. Zeit.," 1892, Nos. 29, 30, 31, and 32.

A WELL-WRITTEN review of the different methods of treating tuberculous stenoses.

Michael.

Grayson, C. P.—*General Respiratory Tuberculosis; Pulmonary. Laryngeal, Nasal.* "Med. News," Aug. 13, 1892.

THE case was interesting from the generalization of the disease. The patient derived most benefit from applications of mercury chloride 1-500.

The nasal lesion was curetted, and the same solution rubbed in. Insufflations of iodoform and other powders were ineffective. The patient of course died.

R. Norris Wolfenden.

Seton, B. G. (Punjab).—*Reflex Spasm of the Glottis following Distension of Stomach.* "Lancet," Oct. 1, 1892.

A NATIVE soldier was attacked with severe laryngeal spasm. He had eaten a large quantity of uncooked goat's flesh in pieces of considerable size. After an hour he had discomfort in his larynx. Fomentations over the larynx gave no relief, and that from chloroform was transitory. No emetic could be given on account of the difficulty in swallowing. Counter-irritation, by means of blisters along the course of the vagus, diminished the spasm, and an emetic could then be administered with immediate benefit. The writer holds that the spasm was reflex, and not the result of direct pressure on the larynx by a mass of meat in the œsophagus.

Dundas Grant.

Hulke, J. W. (London).—*A Case of Suicidal Wound of the Throat, completely severing the Larynx and opening the Gullet; suturing of each; survival during several hours.* "Lancet," Aug. 20, 1892.

THE patient was able to speak in a whisper soon after the infliction of the wound, although the upper portion was separated from the lower by an interval of several centimètres, and one vocal cord was damaged. Stout silk sutures were used for the larynx in preference to catgut, and before the stitching a large Trousseau's tube was inserted in the trachea. The title of the paper describes the general nature of the case.

Dundas Grant.

Ast.—*Foreign Body in the Air-Passages.* "Münchener Med. Woch.," 1892, No. 34.

A CHILD, four years old, had inspired a small stone. No cough or dyspnoea followed. Two days later slight attacks of suffocation occurred. The examination of the chest showed that there was on the right side of the lung dulness without breath sounds. Respiration and pulse were accelerated. Temperature 39.5. For the next few days the symptoms of pleuritis appeared. Ten days later a severe attack of suffocation occurred. The stone was coughed out. The pleuritic symptoms afterwards ceased. Convalescence was followed by cure.

Michael.

Harris, T. J.—*A Foreign Body in the Trachea.* "New York Med. Journ.," Sept. 17, 1892.

A PIECE of meat half an inch long was impacted below the vocal cords and posteriorly in the trachea of a woman. A portion was removed by the long œsophageal forceps, the rest being expelled by the patient.

R. Norris Wolfenden.

Spishamy (Moscow).—*Tumours of the Hyoid Bone.* "Deutsche Med. Woch.," 1892, No. 38.

UP to now only one case of tumour of the hyoid bone has been published by Boeckel. It was of the size of two fists. The patient died a short

time after the operation. It was a mixed malignant tumour, cystic fibro-enchondroma. The author's patient, twenty-five years old, had a tumour on the right side of the hyoid bone of the size of an egg. The tumour was remarked five years ago. Operation was performed by Prof. Skliwosowsky. Cure followed. The microscopical diagnosis of the tumour was enchondroma.

Michael.

THYROID GLAND, &c.

Warren, J. Collins (Boston).—*A Case of Enlarged Accessory Thyroid Gland at the Base of the Tongue.* "The International Journal of the Medical Sciences," Oct., 1892.

THE author refers to a tumour the size of a hen's egg, attached to the tongue, in front of the epiglottis, in a female aged fifty-two, who had suffered from its presence thirty years, first noticing it at the birth of a child. Becoming inflamed, it caused laryngeal irritation. By drawing the tongue well forward by ligatures passed through its base, the tumour was brought well into view, and enucleated by incisions through the mucous membrane, under which it lay, three vessels requiring ligature. Convalescence occupied two weeks. The tumour was found to possess a smooth fibrous capsule, and to consist of minute cysts, filled with a viscid yellowish colloid material. Under the microscope closed cavities from 0.07 to 0.40 millimètres, lined with low cylindrical epithelium, and filled with a homogeneous material, staining deeply with picric acid and eosin, were observed, all indications that the structure is that of a ductless gland, histologically corresponding to the thyroid. Dr. W. F. Whitney, of the Harvard Medical School, who examined the structure of the growth, is of opinion that it is a thyroid inclusion, pointing out that the middle lobe of the thyroid is developed in a tract which is directly continuous with the foramen cæcum of the base of the tongue. Butlin reports ten such cases, and Bernays and Sutton regard them as accessory thyroid glands, while Wölfler cites accessory glands developing into tumours, both median and lateral e.g., mucous cysts near the hyoid, retro-sternal goitres, tumours below the angle of the jaw, or beneath the sterno-mastoid muscle, etc.

Wm. Robertson.

Palma (Prague).—*Case of Sarcomatosis following Primary Sarcoma of the Thymus Gland, similar to Lymphatic Leukæmia.* "Deutsche Med. Woch.," 1892, No. 35.

THE patient, eighteen years old, suffered from symptoms of leukæmia, evidenced by the result of the microscopical and chemical examination. There was also a tumour of the left inguinal region, with dulness on percussion of the upper part of the left thorax. He died two months later, and the *post-mortem* examination showed sarcoma glandulæ thymicæ progrediens ad pericardium et pleuras, sarcoma secundaria glandularum lymphaticarum hepatis et lienis.

Michael.

E A R.

Heaton (Manchester).—*Congenital Malformation of the Right Ear, etc.* "Brit. Med. Journ.," Feb. 13, 1892.

THERE were two small supernumerary auricles in front of the ear; external meatus absent, its position being indicated by a dimple covered with normal skin. The ramus, condyle, and coronoid process of the lower jaw of the same side were rudimentary. There was evidence (not given) of an internal ear, and some evidence of a middle ear.

Wm. Robertson.

Dalby, W. (London).—*Cancer of the Ear.* "Lancet," July 2, 1892.

THE author has seen six cases of this very rare disease. The usual order of events, as in four of the cases, was a suppuration from the middle ear, followed by a polypoid growth in the meatus. Pain and facial paralysis usually ensue, and the growth tends to invade the mastoid process, ulcerating through the skin, over it, and fungating through the opening thus formed. In only one case was there absence of precedent suppuration, and in one the disease commenced on the surface of the mastoid and extended inwards. Microscopical examination of the polypoid growth showed "typical cell nests, composed of squamous epithelium, surrounded by granulation tissue."

[Our readers may remember Dr. Charazac's paper on Malignant Disease of the Ear in the "Revue de Laryng. d'Otol.," &c., 1892, abstracted in the JOURNAL OF LARYNGOLOGY for March, 1892.]

Dundas Grant.

Bonnier (Paris).—*Ménière's Disease a Symptom of Chronic Bright's Disease.* "Lancet," August 27, 1892, p. 511 (Paris Letter).

UNDER the designation of "Auricular Brightism," he describes a form of Ménière's disease paroxysmal in character, generally due to vaso-motor trouble, such as congestions, hæmorrhage, or œdema of the internal ear determined by uræmia, and which may be an early indication of kidney disease, or only appear late in its course. In its treatment quinine (which is useful in ordinary forms of Ménière's disease) must be avoided, and an exclusive milk diet insisted on. The ear complications of Bright's disease, described as frequent by Dieulafoy, are incomplete deafness, accompanied or unaccompanied by noises, and sometimes associated with sharp pains in the ear or in the face. [The "specialist" should keep this cause of ear-symptoms well before his mind, as he ought also—and no doubt does—in cases of epistaxis. We abstracted lately (JOURNAL OF LARYNGOLOGY, September, 1892), a paper in which Dr. Church, of Chicago, dwelt on the importance of recognising the vertigo of arterio-fibrosis, and recommended iodide of potassium as a remedy. We cannot refrain from citing as analogous, Dr. Francis Hawkins' paper read before the Clinical Society of London, on cases of hæmoptysis due to kidney disease. They were

made worse by the routine use of ergot, but cured (*quâ* hæmoptysis) by the treatment appropriate to the renal condition.] *Dundas Grant.*

Buck, Albert H. (New York).—*A Contribution to the Technique of Mastoid Operations.* "Med. Rec.," July 23, 1892.

IN order to keep in view the position of the upper and posterior curved margin of the osseous meatus during the course of the operation of opening the antrum, Dr. Buck makes use of a sharp steel hook, shaped like a single claw of a hammer in miniature. This is inserted into the meatus between the bone and the soft parts. There is a small knob, corresponding to the knob of a hammer, which remains a visible guide even when the hook is drowned in blood. The handle is held by the anæsthetist in the long axis of the patient's body.

He recommends a large external incision, "and preferably one that is curved (horizontal above, curving gradually into vertical below)." He uses a very broad retractor, by the aid of which the flap composed of the auricle and immediately surrounding soft parts can be drawn well forward. *Dundas Grant.*

Editors of the "Medical News."—*Excision of the Membrana Tympani and Removal of the Two Largest Auditory Ossicles.* "Medical News," September 10, 1892.

THE operation is performed in two varieties of aural disease: (1) in chronic purulent otitis media; (2) in chronic non-purulent otitis media.

In chronic purulent otitis media excision of the necrotic membrane and ossicula and of the granulation tissue always present in these cases a large quantity of obstructive and septic matter from the drum space, promoting in this way thorough drainage, and permitting at the same time of more direct and complete antiseptis and asepsis of the suppurating tympanic cavity. The operation also favours a renewal of the muco-periosteum of the wall of the tympanic space when this has become carious, and improves the hearing greatly in some cases in consequence of more direct entrance of sound-waves to the stapes in the oval window, brought about by the removal of the mechanical hindrances already named. In chronic non-suppurative catarrh the retraction of the membrane and malleus brings about retraction of the incus and stapes with consequent hardness of hearing and tinnitus and vertigo.

By excision of the membrane and ossicles in such cases the hearing is frequently improved, especially where there is no restitution of the membrane. The entire and permanent relief from aural vertigo and tinnitus afforded by this operation proves one of the most brilliant achievements of modern aural surgery. *W. Milligan.*

ASSOCIATION MEETINGS.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Fourteenth Annual Meeting, held at Boston, Mass., June 20, 21, and 22, 1892.

"Medical Record," July 28, 1892.

Dr. S. W. LANGMAID, Boston, *President.*

THE PRESIDENT'S ADDRESS.

Dr. LANGMAID opened his address with a touching reference to the loss of Dr. Donaldson, of Baltimore, and of Sir James Morell Mackenzie—the former a Fellow, the latter an Honorary Fellow, of the Association. He then made a brief reference to the rapid advance which laryngology had made since only a few years ago, when it first took a prominent position among the specialties in medicine. He thought that our advance would be more greatly helped by faithful adherence to this Association. Companionship with fellow-workers was necessary to completeness of one's growth. Membership was not only a means of information, but it acted also as a stimulus to work. "Let us hope," he said, "that the next ten years will show such work performed that American laryngology will occupy no other position than that which has always been accorded it, namely, the first in merit as well as priority in establishment."

On the Influence of Certain Diathetic Conditions upon the Prognosis in Operations upon the Throat. By Dr. D. BRYSON DELAVAN, New York.

He called attention to the importance of discovering, before operations upon the throat, the possible existence of a diathetic condition which might influence the result of the operation, and described several such general conditions, including the strumous, the rheumatic, and the hæmorrhagic diatheses, and the diseases exophthalmic goitre and general lymphadenoma. He concluded that in the case of the two last mentioned the removal of enlarged tonsils and of adenoid hypertrophy at the vault of the pharynx was attended with no extraordinary risk. With regard to the prognosis in strumous cases, complete removal of the offending tissue is more difficult, recovery slower, and recurrence more probable. In view of the latter, patients should be warned in these cases of the possible necessity for future operation. Still, the earlier such cases are operated upon the better. In rheumatic cases no especial difficulties are offered, and the prognosis is most brilliant. The hæmorrhagic diathesis is the most important, because the most dangerous. Its presence contra-indicates all surgical interference. The only known accidents that have happened in this country in the removal of adenoid hypertrophy at the vault of the pharynx have been in hæmophilic subjects. Adenoid enlargements are unusually common in these patients. There is no method of operating upon them now known that is safe. The galvano-cautery is not a reliable hæmostatic even in ordinary cases, as bleeding may occur after its use, both immediate and secondary. It should not be relied upon, therefore,

in the case of bleeders. The writer urges (1) that rigid examination as to the possible existence of the hæmorrhagic diathesis be made prior to operation upon the tonsils and adenoid tissue of the pharynx in every case ; (2) that in the existence of hæmophilia, operation by any procedure at present known is absolutely contra-indicated ; (3) that, since many of these cases urgently require relief for their throat troubles, it is most desirable that a method of reaching them more satisfactory than any heretofore practised be suggested.

Some Pathological Conditions of the Upper Air-Passages coincident with Attacks of la Grippe. By Dr. S. HARTWELL CHAPMAN, New Haven.

Beginning with November, 1891, it had been his pleasure during five months to observe certain secondary affections of the upper air-passages coincident with la grippe ; and from a record of a large number of cases he had selected sixteen which were of more than ordinary interest, as the patients had previously been under treatment for other diseases from seven years to six months. Eight were cases of spinal disease, one of diabetes insipidus, four of renal disease, three of rheumatic gout. The onset of la grippe was quite similar in all these cases : headache, nausea, anorexia, flying pains, exhaustion, progressing to extreme malaise, moderate fever, pulse either considerably accelerated or greatly retarded, mild delirium, pain and stiffness in the back. He called attention to the close similarity between these symptoms of la grippe and the symptoms of the milder forms of epidemic cerebro-spinal meningitis. In the rheumatic cases, the affections of the upper air-passages, during the attack of la grippe, were : in one, laryngitis crouposa, complicated with broncho-pneumonia ; in two, aphthæ of mouth and pharynx, extending to the brim of the larynx. In the four cases of renal disease, the attack of grippe showed the following coincident affections : sanguineo-purulent naso-pharyngeal inflammation, combined with acute tonsillitis and sympathetic enlargement of the cervical glands. The swelling of the tonsils became so great as to threaten suffocation, and was relieved by cutting. In some of them there was hæmorrhage, but not dangerous ; in one, croupous laryngitis. The duration of the naso-pharyngeal inflammation was about two months ; of the laryngitis, only four days. In the case of diabetes, there was intense congestion of the entire pharynx and œdema of the larynx, which continued eight days and markedly interfered with breathing. During the severest period of the disease the pulse, which before had been very rapid, fell to 70, and the patient was less nervous. In one of the eight cases of spinal disease, causing humpback, a form of paralysis developed which had been absent for many years ; and during the attack the pulse was reduced to 50, the normal being 80. The spinous processes were intensely sensitive. In three cases of curvature of the spine, in females, the attack of grippe was not severe, but in all there was reduction in the rate of the pulse, extreme malaise, and very sensitive spine. Secondary affections were aphonia and purulent naso-pharyngeal inflammation. Some other interesting points were also present.

BEVERLEY ROBINSON (New York) had not observed the complications mentioned by Dr. Chapman.

MULHALL (St. Louis) gave some experience with œdema of the larynx in la grippe.

Pharyngo-mycosis. By FREDERICK I. KNIGHT, Boston.

Ever since special attention had been paid to diseases of the throat, observers had been struck by the peculiar obstinacy of chronic folliculitis of the tonsils, which had been not infrequently accompanied by a similar condition of the base of the tongue, and occasionally of the arches of the palate and of the pharynx. The affection consisted of whitish, yellowish, or greyish exudations, situated at the mouths of the follicles, sometimes cheesy and easily removed, sometimes cretaceous, and sometimes only tough, stringy, running deep into the follicles. There was quick recurrence after removal of the products, and even after the subsequent application of strong medicaments. Fraenkel had, in 1873, pointed out an abundance of leptothrix threads in such products, and some writers had looked upon the parasite as the cause of the condition. A number of other forms of parasitic growths in the throat had also been described. Other observers, notably Chiari, believed that the parasite was simply an accidental complication. In the treatment of typical cases of mycosis, the author had experienced the same difficulty as others, and found nothing satisfactory except boring deep into each follicle with a galvano-cautery point. If any of the disease were situated in a part of the tonsil which could be excised, this would shorten the treatment.

Dr. DELAVAN had found the treatment mentioned by Dr. Knight unsatisfactory, for enough of the leptothrix would remain to cause a recurrence. He had obtained the best results from frequent washing with borax, also bichloride of mercury, and, above all, correction of disturbed digestion.

Dr. DE BLOIS (Boston) used instrumental means, also a mild astringent, as of nitrate of silver, and gave attention to digestion.

Dr. JOHNSON (Baltimore) found these cases mostly debilitated school-children and old subjects. He used local and constitutional measures.

Dr. MULHALL (St. Louis) had found nothing of any effect without treatment of the stomach.

Dr. WRIGHT (Brooklyn) said that these were fungi, and like other fungi would continue to grow as long as they receive the proper food.

Dr. CHAPMAN treated these cases locally with fuming nitric acid, introduced through a grooved platinum needle, and internally by nitro-muriatic acid.

Dr. BEVERLEY ROBINSON had not seen many cases, but in one failed to effect a cure with various remedies until the patient went to Sharon springs.

Dr. LANGMAID did not object to correcting any constitutional condition, but regarded local mechanical measures necessary.

A Case of Fibrous Epithelioma at the Root of the Tongue. By Dr. JONATHAN WRIGHT, Brooklyn.

This case, on account of the interest connected with the diagnosis, was extremely difficult, because of the rare form in which the disease

presented itself. When he first examined the patient the tongue seemed normal, except for two prominences on each side, at the base, which felt hard and firm. Grave doubts were entertained as to their exact nature for several months; finally, Dr. McBurney operated for cancer, but by this time an ulcer had formed which went to make the diagnosis more evident. The patient did well for a time, but finally died, without, however, a recurrence.

Report of some Cases of Membranous Sore Throat. By Dr. BEVERLEY ROBINSON, New York.

The cases made the basis of a paper on membranous sore throat. He used the term "membranous sore throat" advisedly. In the three cases reported, there was great difficulty of diagnosing between true diphtheria and a membranous sore throat of some other origin. The bacteriological examination, however, failed to reveal the Loeffler bacillus, while streptococci were present in greater or less abundance. The author pointed out the fact that failure to find the Loeffler bacillus did not necessarily disprove the existence of diphtheria. He impressed the fact that a membranous sore throat of a simple character compared with diphtheria might exist, and one still be in great doubt as to diagnosis. Where such doubt existed, he claimed that it was unwise to prematurely make a diagnosis of true diphtheria, and cause the family the alarm and trouble such an announcement would necessarily imply. At the same time certain precautions could be taken against unnecessary exposure of the well. He especially objected to sulphur fumigations. The treatment, however, might be carried out with all the precautions which one would take in a case of true diphtheria. In this direction he spoke highly of the use of powdered cubebs, taken in small pinches into the mouth at frequent intervals. He must acknowledge, however, that the antiseptic powers of cubebs in the destruction of the Loeffler bacillus had not been proven, at least outside the human body. He condemned the custom of the health officers in some sections of posting houses with diphtheria, as if persons passing such houses and not entering them were liable to take the disease.

Considerable discussion followed, and a resolution was adopted, making as a subject for discussion at the next annual meeting "The Best Means of Protecting the Public against the Spread of Diphtheria."

Presentation of Instruments. By Dr. MORRIS J. ASCH, New York.

A tampon for use after operations for deviations of the nasal septum. The tampon consisted of a hard rubber tube, with perforations.

Dr. Asch also presented a set of Dr. Dessau's antiseptic electrodes and curette for adenoid growths.

Dr. D. B. DELAVAN (New York) demonstrated a new method of administering iodide of potassium in cases of tertiary syphilis of the throat, where the ulceration had become so severe that the patient could not swallow with ease. The method consisted in peptonizing the milk with the essence of pepsin in which the iodide of potassium was to be administered.

Dr. J. WRIGHT (Brooklyn) presented an improved forceps for the removal of adenoid growths in the post-nasal space.

Dr. JOHN O. ROE (Rochester) presented an improved Adams' forceps for straightening the nasal septum. It possessed the advantage of enabling one to over-correct the deformity.

Dr. C. H. KNIGHT (New York) showed an improved snare for removal of the tonsils, with a ring-safeguard.

Intubation for Chronic Stenosis in a Boy, aged Ten. By Dr. C. H. KNIGHT, New York.

The boy was admitted to the hospital in October, 1891, and, according to the statement of his physicians, he had been ill for a week or more with dyspnœa, aphonia, cough, and fever; there was a history of bad hygiene and poor diet. When admitted the patient could not whisper, and his breathing was quite noisy and laboured. A marked feature in the case was that the dyspnœa was decidedly more marked at night: it was relieved by inhalations of oxygen. The boy's condition grew worse, and on November 8th Dr. Jarvis examined him, and thought he found a neoplasm beneath the vocal bands. The vocal bands were red, and did not approximate on phonation. Beneath the cords, extending along their entire length, and invading the anterior commissure, was a mass of tissue, paler in colour than normal mucous membrane, having an uneven, and at certain points an almost papillated, surface. No ulceration could be discovered. The air-passage was converted into an irregular slit, so narrow as to excite surprise that adequate respiration was possible. Owing to dyspnœa an O'Dwyer tube was introduced, which was worn, more or less, for many weeks. It was impossible to get sufficient of the pathological tissue to make a satisfactory microscopic examination. Dr. Knight's first impression of it was that it was tubercular, but the absence of pulmonary signs, and the marked change for the better subsequent to intubation, pointed to simple sub-glottic papilloma. After about three months, the boy having got along well with the tube (which was worn only part of the time), he was transferred to the surgical division for tracheotomy, thyrotomy, and radical extirpation of the neoplasm, the idea still being that it was a purely local affair. From this time the progress was rapid toward death from general tuberculosis.

The points of interest were:—(1) The simplicity of intubation as compared with tracheotomy, and the ease with which the tube was extracted with the aid of cocaine, and under the guidance of the mirror; (2) the slight amount of disturbance excited by the tube, and the absence of objection to its prolonged retention. Finally the question suggested itself: Was it a case of primary laryngeal tuberculosis? He believed the patient was much more comfortable than he could have been with the tracheal instead of the laryngeal tube.

Rare Forms of Laryngeal Growth. By Dr. ALEXANDER A. MACCOY, Philadelphia.

He described two cases—one of myxoma of the larynx, which had come under his care in 1888; the other of fibroma of the larynx. The former condition was quite rare: the latter not so infrequent. The

myxoma seemed to have its origin from the margin of the orifice of the ventricle. The patient's voice was completely restored after its removal. In the other case most of the growth was removed by the cold snare, and the remaining part would be operated upon later. It appeared to have sprung from the anterior and right surface of the arytenoid cartilage.

A Case of Tumour of the Larynx. By Dr. H. L. SWAIN, New Haven.

The history of a case of fibro-myxoma of considerable size, attached by a pedicle to the anterior commissure of the vocal cords. He related the difficulties which he had encountered in removing this large growth, whose base was spread out over a greater surface than he had supposed. Its removal had been followed by relief of the difficulty connected with phonation and respiration, and the patient had remained free from recurrence two years.

Dr. C. C. RICE had found the guillotine snare more easily applied in the removal of small laryngeal growths than the forceps. He also mentioned having had syncope follow the use of four per cent. of cocaine in the throat, in the case of a policeman, recently.

Dr. LANGMAID had, on the recommendation of a European author, used nicotine in operation for growth in the larynx in one case, and a very threatening poisonous symptom developed.

The Value of Sprays in the Treatment of Catarrhal Affections of the Upper Air-Passages. By Dr. C. C. RICE, New York.

In discussing this question it was not his object to recommend the spray as a method of treatment to take the place of others. He considered the question of the use of sprays in the form of medicated oily agents, of watery solutions, of astringents, etc. While remarking upon some of the advantages of petroleum preparations, he at the same time pointed out the danger of their inconsiderate use, in that they were followed by a dry condition of the nasal passages, which was anything but agreeable. Such antiseptics as iodoform and aristol lost much of their antiseptic properties when used with oily agents, nor could their stimulating action be so well relied upon when thus used. In catarrhal affections of the upper air-passages nice judgment was required in selecting the drug, and particularly the strength of the solution to be used as a spray. The pressure used and the temperature should be adapted to the particular case, and the location to be reached by the spray. A weak solution of cocaine, say less than one per cent., was perhaps as good an astringent as any, and its place could seldom be taken for any purpose by such agents as morphine, aconite, etc. So far as the degree of pressure was concerned, fifteen pounds to the square inch was strong enough for the anterior nares, while twenty-five to thirty pounds was sufficient for post-nasal spray. All possible combinations could be made with cocaine, menthol, thymol, etc. By such treatment he believed that one could diminish the number of operations for nasal disease.

Considerable discussion followed, in which Dr. Bosworth, of New York, spoke rather disparagingly of nasal sprays as anything else than a cleansing measure, while Drs. Mackenzie, of Baltimore, Asch, of New York, and others, were inclined to give them a greater degree of credit.

Adenoid Forceps. By Dr. J. W. FARLOW.

A form of adenoid forceps, which he had purchased in Paris, and had found an excellent instrument for removal of adenoid growths in children and adults.

The Correction of Deformity resulting from Abscess of the Nasal Septum. By Dr. JOHN O. ROE, Rochester.

A series of photographs illustrating the results of a new method for correcting this deformity, which he had found very successful in two cases. The method adopted by Tagliacozzi, and in use at the present time, consisted in the correction of the defect by a rhino-plastic operation. A serious defect, however, in this method was the unsightly scar resulting from the operation, which was sometimes scarcely less pronounced than was the original deformity. Five years ago Dr. Roe had submitted to the profession an operation for the correction of the deformity termed pug-nose, by a subcutaneous incision, without in the slightest degree wounding the skin; and again, in 1891, an operation, equally new, for the correction of angular deformities of the nose by subcutaneous incision. At the present time he wished to present a simple method by which the deformity frequently resulting from abscess of the nasal septum might also be corrected, by a subcutaneous and intra-nasal operation. In the case detailed, after considering the various devices to accomplish this purpose without injury to the skin, he adopted the following plan: There was, as usual in these cases, marked thickening and widening of the dorsum of the nose proportionate to the amount of flattening. The thickened ridge of tissue was incised on both sides a short distance from the septum, at a point where it thinned into the ala. The incision was made along the edge of the flattened tissue through the cartilage of the ala, to the under side of the skin, care being taken not to wound the latter, which was raised from the dorsum of the nose, and these flaps then turned upward and held in place by small ivory spring plates on each side, having holes through which sutures were passed from one to the other, extending through the flaps. These threads were then tied so as to hold the flaps firmly in place, care being exercised not to strangle the part. These relieved the flattened condition of the nose, but not entirely. Owing to the entire absence of the triangular cartilage there was not sufficient support to hold the nose upright. In order to increase the solidity of the septum, he first scarified each side of the lower portion of the septum, leaving, however, the front portion of the skin intact. He then cut wide, thick flaps from the floor of the nostril opposite the portion of the septum which he wished to render more rigid. These he turned upward and fastened together with clamps in the manner similar to the upper flaps, and also connected the upper border of the flaps to the cut portion of the septum with fine sutures. The result was excellent. To maintain the nose in position until the parts healed, he used a small spiral spring.

The After-Results of Nasal Cauterization. By Dr. T. A. DE BLOIS, Boston.

Owing to the difficulty of tracing patients upon whom operation had

been performed, which may not have proved ultimately successful, he gave the history of five or six in which he or others had cauterized the nose two or more years previously. In most of them the cauterization had been for an hypertrophied condition of the turbinated bone, and the immediate result, as far as relief of the symptoms was concerned, had been more or less successful. Two years subsequently the patients had returned, again complaining of nasal obstruction. A rhinoscopic examination had shown in some, on either side of the original scar left by the cautery, a swollen and projecting mucous membrane which blocked up the nasal passages. In another case, a somewhat remarkable one, the mucous membrane, which was thrown in corrugated folds, had been cauterized frequently at different hospitals. Some of these cases, and doubtless many others walking the street, showed that the cautery might fail of the desired effects by improper application, such as, on the one hand, making the scar tissue too deep, or, on the other, too shallow, and, again, of extending it through too great a distance, or not far enough.

A somewhat lengthy discussion followed, which was devoted mostly to the immediate results of bad usage of the cautery. The efficacy and safety of this method of treatment, in cases to which it was adapted, was dwelt upon by Drs. Wright, Langmaid, Mulhall, and others.

A Case of Suppurating Ethmoiditis. By Dr. J. H. BRYAN, Washington.

A case of suppuration of the ethmoid cells, terminating in caries, and illustrating the condition described as rhinitis caseosa. The patient gave a history of having suffered from caries of an upper molar tooth. In July her nose became closed, the secretions, at first watery, became thick and foetid. There was a pain over the bridge of the nose, extending along the infra-orbital ridge to the temporal region. Severe headache, pain on pressure of the eyeball, crepitating sensation under the orbit. On the left side of the nose were seen two mucous polypi attached to the anterior extremity of the middle turbinated bone. After snaring off the polypi, the thick caseous secretion was observed to come from both the middle meatus and from above, between the middle turbinated body and the septum. Examination with the electric light showed the left antrum to be opaque, showing this to be complicated with the inflammation of the ethmoid cells. In spite of treatment the condition grew worse, until, on her way to his office, the abscess discharged spontaneously a great quantity of thick caseous secretion, after which the pain ceased and general health improved. The complications of suppurating ethmoiditis more frequently met with were abscess of the antrum, abscess of the orbit, and meningitis. In the above case, the antral complication was purely accidental, dependent upon a carious tooth.

ELECTION OF OFFICERS.

President, MORRIS J. ASCH, New York; *First Vice-President*, S. JOHNSON, Baltimore; *Second Vice-President*, J. C. MULHALL, St. Louis; *Secretary and Treasurer*, C. H. KNIGHT, New York; *Librarian*, T. R. FRENCH, Brooklyn; *Member of Council*, S. W. LANGMAID, Boston.

Place of next meeting, New York, last week in May.

AMERICAN OTOLOGICAL SOCIETY.

*Twenty-fifth Annual Meeting, July 19th, 1892.**"Medical Record," August 6th, 1892.*

 GORHAM BACON, M.D., New York (*President*), *in the Chair*.

Seven Cases of Mastoid Disease exhibiting somewhat extensive Carious Processes. By DR. OREN D. POMEROY, New York.

Case I.: J. W., aged nineteen. Two years before admission he had a post-aural abscess, which was incised, and a few months later the mastoid was freely opened and carious bone removed. On entering the hospital the mastoid opening was nearly closed, and the middle ear was suppurating. There was a swelling below the auricle, red, painful, and preventing free movement of the jaw; pressure on this part evacuated pus from the tympanum. Two days later the patient was etherized, and the granulations in the tympanum were removed by the curette. An extension of the mastoid incision opened into a large cavity that seemed to include the mastoid and tympanum. A large quantity of pus was evacuated by syringing. Temperature in the evening, 103.6° F. The next day the temperature was 99° F. Within two days an abscess, in front of the velum on the left side, was opened. This showed no apparent communication with the ear cavity. After two weeks the discharge became much less, and the carious cavity showed signs of filling up with healthy tissue. The abscess in the throat was probably due to the ear trouble.

Case II.: M. G., aged thirty-four. Two months before admission he had acute suppurative otitis in the left ear, with mastoid periostitis, for which Wilde's incision was made. There was an opening in the mastoid three-fourths of an inch deep, into which the little finger could be thrust, at the bottom of which pulsation was apparently felt. The meatus was filled with dried epithelium and pus. There was elevation of temperature from rheumatism in the left hip-joint. The mastoid cavity was cleaned out and packed with iodoform gauze, and large doses of iodide of potassium were given. A few days subsequently some easily-detachable bits of carious bone were removed with curette and gouge. The temperature at this time was 103° F., but this was reduced by phenacetine. Stimulants were freely used, and the patient became much better, and was able to walk about the wards. A month later pieces of carious bone were removed by the bone curette and gouge. Other portions were washed out by the syringe. Considerable granulation material and a cheesy substance were also removed. The part was dressed with iodoform gauze after irrigation with bichloride solution. The patient was discharged two months after admission, much improved.

Case III.: T. S., aged sixteen, came into the hospital with an acute suppurative otitis media of both ears. Six days later a Wilde's incision was made on the left mastoid. The discharge continued from each ear

when he left the hospital, some weeks later. It was seven months after this that he came under the author's care for the first time. Over the left mastoid was a small aperture leading into a large carious cavity, which included the mastoid and tympanum. This opening was enlarged by a stout knife, so that the finger could be introduced into the mastoid cavity. Dead bone and granulations were found. On syringing, a soft, flocculent material, resembling broken-down brain-substance, was removed in large quantities. The opening in the mastoid was more than an inch in depth. Antiseptic irrigation was practised, and cotton smeared with vaseline, 5000 parts, and bichloride 1 part, was applied to the wound. After three weeks granulations and small bits of bone were removed by the curette. An abscess subsequently appeared above the meatus and communicating with it. This was opened and found not to communicate with dead bone. It was treated antiseptically and by a compress, and gradually the mastoid closed and the discharge from the ear nearly ceased.

The right ear in the meantime had filled with granulations, which were removed with the curette. Pressure on the mastoid caused pus to exude from the meatus, and a Wilde's incision was therefore made in the expectation of finding an opening in the mastoid, but none was found. The wound was kept open by a cotton tent. A month later there was an opening into the mastoid, and two or three considerable masses of dead bone were drawn out with the artery forceps. This left an enormous cavity, which seemed to include the tympanum. Polypi were also removed. There was much hæmorrhage. Antiseptic irrigation was practised, and vaseline and bichloride on cotton was applied. Since this time granulations and bits of dead bone have been removed. The external wound has now closed with considerable sinking, and the ear has almost ceased discharging.

Case IV.: A. W., aged two, had suppurative otitis of the left ear, dating back five months. The author first saw her in November, 1890, when the tympanum was full of polypi. There was a large carious opening in the mastoid, which was filled with granulation. Small bits of carious bone and a cheesy-looking detritus were removed, and in a few days the patient was much improved. After another month more granulations were removed and some dead bone. Four months later the mastoid opening was closed with considerable sinking. The discharge from the ear diminished after each operation.

Case V.: J. S., aged four months, had a swelling behind the left ear of four days' duration, with a discharge from the ear for one month. A Wilde's incision was made, and an opening into the antrum found. After a few days a probe was passed in one and a half inches in the direction of the tympanum, touching bone. This opening was enlarged by the drill, and kept clear by syringing with an antiseptic solution. The patient was brought very irregularly, and the treatment was not carried out intelligently, and the child died two months later with brain symptoms.

Case VI.: A. P., Italian, aged forty-two, had an otitis media suppurating since three months, with a swelling over the mastoid. The latter was at once incised, and a handle of a scalpel could be thrust through an

opening in the cells, which seemed to include the tympanum in its area. Antiseptic irrigation was practised for some weeks. Granulations were removed from the mastoid. Later there was considerable cedematous swelling about the mastoid, which subsided in a few days, and the temperature became normal. He had several attacks of severe headache, which were relieved by quinine and bromides. More granulations and dead bone were removed, and the next day the patient was better. Soon after this he became offended and made a serious attack on the nurse. He was then sent to the New York Insane Asylum to be examined as to his mental condition, but was soon discharged. He has recently been heard from, and the ear symptoms are not urgent.

Case VII.: A. P., aged forty-two, had a suppurative otitis media on the left side, of one week's duration, and a painful swelling over the mastoid since two weeks. Pus was evacuated by a Wilde's incision. A large opening was found in the mastoid, extending inward one and a quarter inches from the surface. After four weeks of treatment by irrigation, the external wound was nearly closed, but a sequestrum of bone was found. There was also apparently some cellulitis of the adjoining soft parts. The opening was enlarged and more dead bone removed. After this there was decided improvement, and the patient disappeared from observation.

In these cases no effort was made to remove all the dead bone, but whatever was loose or readily detachable was taken away. Adequate antiseptic drainage was carefully looked after, and the vital energies were kept up by stimulants, tonics, food, and proper nursing.

It was strange that only one of these cases resulted fatally, when it is known that any considerable quantity of dead bone in the vicinity of the brain may induce fatal cerebral disease. The author did not think it proper to attempt the removal of dead bone where the meninges are in danger of being encroached upon.

Cranimetric Studies in Relation to Aural Anatomy. By Dr. B. ALEXANDER RANDALL, Philadelphia.

He referred to the numerous careful studies of the temporal bone made with special relation to operation, and the conflicting results of Korner and Schultze as to a relation between the cranial index and the dangerous position of the lateral sinus and the middle cerebral fossa. Recognizing from the first the need of more extensive examinations, he had been accumulating data bearing on the matter, and offered now a preliminary report, principally to secure criticism of his methods. Only 122 skulls, 73 broad-headed, 33 long-headed, and 16 medium in index, were used in the tabulation, and the only clear showing was that maximum or minimum dimensions might be found on either side and in any form of skull. The belief in the presence of greater danger on the right side and in the brachycephalic skull received slight confirmation, the cerebral fossa being actually more often lower on the left. But no deductions, he held, should be attempted from so small a series of examinations, since any indications are probably worthless which are derived from less than one thousand skull measurements.

Otitis Media and Optic Neuritis. By Dr. CHARLES J. KIPP, Newark, N. J.

A case of purulent inflammation of the middle ear, with double optic neuritis and other symptoms of intra-cranial lesion, but without tenderness of the mastoid process, in which the opening of the mastoid cells was followed by rapid subsidence of the optic neuritis and cure of the disease. Particular attention was called to the absence of tenderness over the mastoid even on percussion, and to the desirability of repeated ophthalmoscopic examination in prolonged middle-ear disease.

Mastoid Cases. By Dr. C. J. BLAKE, Boston.

Of twenty-five patients with mastoid congestion and inflammation seen in the first six months of this year, three were treated by continuous cold coil with excellent effect. The remaining twenty-two cases came to operation at various stages of the mastoid disease, and with various complications. Two cases died, one on the ninth day, complicated with pneumonia, and the other on the tenth day, with meningitis from extension of the suppurative process from the middle ear through the tegmen tympani.

Basilar Meningitis occurring in a Case of Chronic Purulent Otitis Media. By Dr. H. KNAPP, New York.

He reported the case of a healthy-looking man, aged thirty-five years. About the middle of April, 1892, he began to complain of headache, apparently due to neuralgia. This, however, was succeeded by slight elevation of temperature, but no change in the pulse and no tenderness over the mastoid. The pupils were normal. By the end of April there was drowsiness, with nervous movements of the hands. Meningitis dependent upon aural disease was diagnosed by the attending physician. The patient was seen by two prominent neurologists, who diagnosed cranial abscess from ear disease.

The speaker saw the case on May 3rd. There had been discharge from the right ear for three years, which had ceased during the previous week. Temperature, 102.2° F. Headache, stupor, incoherent and difficult speech, and delirium were present. The pupils and fundus were normal, and there was no painful spot on percussion of skull. The diagnosis was concurred in and operation urged. This was done the next day. The mastoid was found sclerosed throughout. The superficial portion of the bone presented some evidences of disease, but the deeper the bone was exposed the healthier it appeared. The operation was then suspended. The patient continued to sink, and died a few days later. The autopsy showed marked evidences of basilar meningitis. The lungs were then examined, and distinct evidences of pulmonary tuberculosis found. The patient had presented no symptoms suggesting examination of the lungs, and all the indications pointed to cranial suppuration following aural disease.

Pyæmia following Acute Suppurative Otitis. By Dr. J. B. EMERSON, New York.

A woman, twenty-four years of age, was admitted to hospital with a

free purulent discharge from the ear, but no special tenderness over mastoid, no redness, and no œdema. The temperature for the first six days varied between 101° and 102° F., at the end of which time there was a chill, and the evening temperature rose to 105° F.; pulse, 125. There was no pain, except in the back of the neck, very little tenderness over the mastoid and left side of head, but no redness or œdema over mastoid. The ear was discharging profusely. The patient's condition continued about the same for five days, when the evening temperature reached 105·4° F. There was still no redness, œdema, or tenderness over the mastoid, and the discharge from the ear was free. The general condition of the patient continued to improve, but an abscess developed over the right sterno-clavicular articulation. Later a second collection of pus formed over the sternum. This was opened, but soon after a swelling formed over the left side of the neck. A few days later an incision was made into the swelling, and pus was found at a depth of one and a half inches. No direct communication with the mastoid could be found. Following this the patient slowly and steadily improved, and was discharged after a course of treatment extending over a period of four months.

Mastoid Operation. By Dr. T. Y. SUTPHAM, Newark.

On March 17th, 1892, he was called to see Miss B. K., aged sixteen. There had been chronic otitis media of the left ear for several years. For a few days there had been intense pain and a temperature of 105° F., but no sign of mastoid trouble other than the pain. The next day there were general septicæmic symptoms with chills, alterations in temperature, and vomiting. A hard swelling beneath the sterno-cleido-mastoid muscle was discovered. On May 22nd the mastoid was opened, but there was only a drop or two of purulent fluid. The condition of the patient continued very unfavourable until May 30th, when pus began to flow freely from the mastoid wound. The temperature then fell to 99° F., and the patient made a rapid recovery.

Mastoid Disease following an Operation for the Removal of Adenoid Vegetations. By Dr. GORHAM BACON, New York.

The patient, aged thirty, said that a physician had a week before removed adenoid vegetation from the naso-pharynx by means of the index finger, and completed the operation the following day with forceps. She had a subacute pharyngitis at the time. Two days after the operation she had a severe pain in the right ear, and this was followed by a muco-purulent discharge on the day of admission to hospital. She was immediately put to bed, the Leiter coil applied, and the ear douched frequently with a warm boracic acid solution. Under this treatment the mastoid symptoms soon disappeared. A week later a periosteal abscess on the right side was opened, and about a drachm of pus escaped. An incision in a similar swelling on the left side gave a negative result. The patient made a good recovery, and at no time did the temperature go above 100° F. The case was reported because the writer had not seen any mention made of acute otitis media and mastoid disease following the operation for removal of adenoid vegetations. It is possible,

however, that the carbolic acid solution which the patient was advised to syringe through the anterior nares by the physician, before she came under the author's care, might have had something to do with the etiology of the disease.

Antiseptic Solutions in Purulent Middle-Ear Disease. By Dr. SAMUEL THEOBALD, Baltimore.

He stated that boracic acid in fifteen-grain solution was still, as it has been for some years, his first choice in the treatment of all cases of recent, and in most cases of chronic otorrhœa. Boracic acid, however, occasionally fails to accomplish what is expected of it, and in exceptional instances aggravates rather than lessens the inflammation. It was in these cases that the speaker had recently used, with very good effect, weak solutions (usually one to eight thousand) of mercuric bichloride. The ear is simply syringed with the solution. Unlike some who have recommended the use of this agent in otorrhœa, he had not usually found it necessary to repeat the syringing more than once in twenty-four hours. Notes of several cases were given in which a prompt arrest of suppuration and closure of the perforation in the tympanic membrane followed the employment of the bichloride solution after boracic acid had been used without effect.

Wound of the Lateral Sinus. By Dr. D. B. ST. JOHN ROOSA, New York.

A wound of the lateral sinus, occurring in the course of a mastoid operation, was followed by septicæmia, with subsequent recovery. The speaker remarked that there had been a number of cases reported in which the sinus had been wounded during operation, but that, so far as he was aware, death had in no instance resulted from this accident. The patient, a young lady aged twenty-three, had for years suffered from recurrent attacks of suppuration of the left ear. It was thought that the mastoid was probably in a carious condition, and it was decided to open it, the drill being used. As soon as the bone was perforated the drill dropped into a large cavity, and the removal of the instrument was followed by a gush of venous blood which could not be checked by ordinary means. It was believed that the lateral sinus had been perforated. The wound was plugged with iodoform gauze. Four days later, when the wound was dressed, there was no trouble from bleeding. Symptoms of septicæmia then set in, but after two months of expectant treatment the patient made a complete recovery.

Remarkable Improvement in Hearing following Removal of the Stapes. By Dr. F. L. JACK, Boston.

He had recently operated on a case of chronic suppurative otitis in a girl aged twelve. After removing portions of the membrana tympani, malleus, and incus, examination showed the head of the stapes to be carious, and it was decided to remove the bone. Previous to operation there was very little hearing in the affected ear. On the following morning the hearing was much better, and this fact suggested the possibility of good results from the removal of the stapes. Previous to

this the speaker had operated on two cases of chronic non-suppurative middle-ear inflammation, by removal of the drum membrane, malleus, and incus. The results, as regards hearing, were not satisfactory. Removal of the stapes is much better in its results, and in the author's experience there had been no inflammatory reaction whatever. The method of operating was then described. Sixteen cases were reported in detail, giving the results of tests for hearing before and after operation. Two of the cases were presented to the Society for examination. The effect of the operation on the hearing, as tested by the watch, in some was not marked in either way, in others there seemed to be a slight loss, and in others again a slight gain. But the result which gave to the operation its importance was the marked improvement in hearing the human voice which was thereby accomplished. If persons who had heretofore heard only with difficulty could be made to hear with ease, the operation by which this was accomplished ought certainly to be worthy of consideration. As to the reason why this effect is produced by the operation, the speaker had no theory to offer other than the simple supposition that it was by the removal of a mechanical obstruction to the sound-waves.

Middle-Ear Operations. By Dr. C. J. BLAKE, Boston.

The history of the surgical treatment of middle-ear disease was first briefly referred to, and it was shown that it had been definitely progressive.

In chronic non-suppurative diseases of the middle ear, where surgical interference is determined upon on account of obstruction to sound transmission through ossicular change, the removal of the incus or malleus may be considered merely incidental, since the stapes is the important element. Various procedures for the mobilization of the stapes have been proposed and practised, but the removal of the stapes has until recently been left out of serious consideration. The justifiability of this procedure is to be premised from the fact that the stapes is especially liable to be tied down by the reduplications found in about eighty per cent. of normal ears.

The writer's experience in this matter consisted in a series of experiments in various cases, beginning with the observations having reference to the diagnostic value of high musical notes (1873), extending up to the present time, and including operations in the following sequence: (1) Excision of the posterior segment of the membrana tympani, allowing the sound-waves to fall directly upon the stapes. (2) Formation of a flap from the posterior segment of the membrana tympani, and attachment of it to the descending process of the incus, for the purpose of transmitting the vibrations of the membrane directly to that bone. (3) Division of the incudo-stapedal articulation through a small triangular opening in the membrana tympani. (4) Attachment of a flap from the posterior segment of the membrana tympani to the head of the stapes, the incus being either wanting or removed. (5) Division of the incudo-stapedal articulation in case of existing perforation of the membrana tympani, division of the stapedius muscle and of numerous folds of adhesions. (6) Removal of the stapes itself.

Mobilization of the stapes, including stapedenotomy and division of adhesion, is of value in cases resulting from suppurative disease, but is of comparatively little value in the chronic non-suppurative disease of the middle ear. For the improvement of hearing and the relief of tinnitus in the severe cases of chronic non-suppurative diseases of the middle ear, the disarticulation and removal of the stapes is likely to be of more lasting benefit than removal of the incus, or of the malleus and incus. The speaker would not hesitate, in the light of present experience, to recommend stapedectomy in cases where he had previously proposed dividing the articulation of the incus and stapes and tenotomy of the stapedius muscle.

The operation varies in difficulty in individual cases, but is more easily done in chronic non-suppurative cases than in those in which the fixation of the stapes is an incident of a long-continued suppurative process.

A Case of Operation for Catarrhal Deafness. By Dr. ALEXANDER RANDALL, Philadelphia.

The case was one of excision of the drum membrane and malleus for catarrhal deafness, followed by suppuration, mastoid empyema, and burrowing abscess of the neck. No reaction followed till the fifth day, when high fever began with severe pain and profuse muco-purulent discharge. This gradually lessened under treatment, but in about four weeks pain and swelling of the occiput, of the mastoid, and at the angle of the jaw, gave evidence of the mastoid empyema breaking into the digastric fossa. The usual incision was made over the mastoid, pus was evacuated from the digastric fossa; the neck abscess beyond the bone sinus was scraped, and the outer surface of the mastoid was trephined in the usual manner, the antrum being freely opened. On irrigation, the fluid passed into the canal at first, then found its way into the pharynx by some lower opening, the temperature fluctuated greatly during the following fortnight, and there was oculo-motor paresis, diplopia, and some mental aberration suggestive of intra-cranial abscess. A good recovery was ultimately made, but at no time was there any improvement of the hearing to compensate in the least for the suffering. While the severe symptoms might possibly be ascribed to an attack of influenza, it is much more probable that the incus, which had been displaced upward, clogged the exit of the antrum and induced the empyema. This would furnish a strong indication for the removal of the incus in any such operation, which even then may be followed by negative or unfortunate results.

Exostosis of the External Auditory Meatus. By Dr. D. B. ST. JOHN ROOSA, New York.

A woman, aged forty-six years, for twenty-one years had had impairment of hearing and tinnitus in the right ear, and pain in both ears at times. Examination showed the external auditory canal to be almost completely closed by a bony growth at the junction of the osseous and cartilaginous portion. She could hear the watch only on contact. The mass sprang from the posterior wall, and left a small space between it and

the anterior wall. On operation it proved to be a very thin plate of bone, and was removed by the chisel without difficulty. The patient did well, and the hearing distance for the watch went up from contact to $\frac{12}{10}$.

Dr. C. J. BLAKE (Boston) stated that in two different families he had seen multiple exostoses occurring in three generations—grandfather, father, and son.

Dr. R. A. REEVE (Toronto) reported a case of exostosis of the meatus in which the special indication for operation was that the growth had become so large as to press upon the tissues of the opposite wall of the canal, causing intense suffering.

Dr. E. E. HOLT (Portland, Me.) exhibited *An Ear bitten off by a Horse*, and made a brief report of the case.

Dr. C. J. BLAKE (Boston) exhibited the *Plans for the New Aural Building* of the Massachusetts Charitable Eye and Ear Infirmary.

ELECTION OF OFFICERS.

President, Dr. GORHAM BACON, New York; *Vice-President*, Dr. HUNTINGTON RICHARDS, Des Moines, Ia.; *Secretary and Treasurer*, Dr. J. B. VERMYNE, New Bedford, Mass.; *Member of Executive Committee of Congress of American Physicians and Surgeons*, Dr. WILLIAM H. CARMALT, New Haven, alternate, Dr. F. B. LORING, Washington.

THE SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY OF PARIS.

Meeting, June 3, 1892.

Case of Adenoid Granulations in an Infant six weeks old. By Dr. C. ASTIER.

Adenoid vegetations are met with at all ages, but it is uncommon to find them in a child six weeks old. It is less the age than the circumstances which preceded and followed the author's intervention which have made his case interesting.

The child was brought one morning by its mother, who stated that a doctor had seen the child, that it was suffering from croup, and ought to be operated on at once by a specialist.

The author found that many of the signs of croup were absent; there was rather stridulous breathing, but the bruits occurred rather in all the throat, and vibrations were felt in the isthmus of the palate, obstructed by abundant mucosities. There was no thoracic or abdominal depression, and no fever; no trace of false membranes, and no swelling of glands. Nasal respiration was nearly completely absent, and there was a flow of thick mucus.

These symptoms had existed since birth, and there had been difficulty in making the child take milk. A probe, wrapped with cotton wool, penetrated the nasal fossæ easily into the pharynx.

Owing to the smallness of the nasal pharynx, digital examination was impossible, and post-nasal forceps were too large. With a smaller pair the author succeeded in withdrawing an enormous mass of adenoid vegetations. He endeavoured to remove as much as possible at one sitting. Injections of boracic acid were then given through the nose, and nasal respiration being established, the

child was put to the breast. The next day the child seemed well enough. On the sixth or seventh day it was completely stifled, and had violent fever. The throat was filled with thick mucus, which was removed with wads of cotton wool. The pharynx was seen to be very red. Introducing the smallest pair of forceps behind the palate, the author withdrew them full of pus. He recognized the condition, and, making an incision into the median line of the pharynx, let out a quantity of pus. The infant was immediately relieved, and breathed better. He saw the child for fifteen days afterwards, and was satisfied with its progress.

The accidents occurring from extirpation of adenoid vegetations—and which are rare—are commonly hæmorrhage, and the author does not know if retro-pharyngeal abscess has been met with before. He attributes it to the forcible introduction of the finger and of instruments of different calibre.

Some Cases of Pharyngo-Laryngeal Syphilis. By Dr. A. CARTAZ.

1. *Indurated Chancre of the Tonsil* occurring in a man of twenty-seven. The left tonsil was red, swollen, and had a grey deep ulcer upon it; the tonsil was indurated; the faucial pillars and palate slightly swollen and reddened; hard painless adenitis of left submaxillary gland. Roseola appeared a few days later.

2. *Chancre of the Tonsil.* A man of thirty-one, arthritic and with several previous attacks of laryngitis. He had undergone mineral water treatment at Vichy, Enghein, Vittel, Canterets, for his throat and for dyspepsia. After influenza, in 1889, there was considerable catarrh of the throat. After a winter at Cannes, he returned with the first sign of the actual lesion. There was a tumour of the tonsil, red, smooth, indurated, with greyish and not deep ulceration with muco-purulent secretion. The corresponding submaxillary gland was very hard; the larynx uniformly red, but without swelling or ulceration. The diagnosis was doubtful, between gumma and primary sore. The patient himself believed that his former troubles had been specific, and he had been treated in this manner for a short time.

Three days later roseola appeared, establishing the diagnosis. Patient is still under treatment.

3. *Chancre of the Tonsil.* A man, aged thirty-eight, came to the author with the diagnosis of pultaceous angina. About a month before, he had seen a small excoriation upon the prepuce accompanied with inguinal adenitis of the right side. Three or four days after there was pain in the throat, and the left tonsil swelled. There never were any *taches* on the skin, and the physician whom he had consulted had never spoken of syphilis. There was constant pain on swallowing, but not great. The hypertrophied, hard tonsil had a flat ulcer upon it, rosy coloured, due to removal of all secretions by frequent irrigations with boracic acid. The whole cervical submaxillary region was the seat of a vast, hard, and painless glandular enlargement. The left tonsil, the larynx, and nasal fossæ were normal. The general condition was good. There was no loss of flesh. There was only a cicatrix on the prepuce, and no glandular lesion of any part of the body, except inguinal adenitis. After eight days' mercurial treatment there was marked diminution of the tonsillar and submaxillary enlargements. The patient has been lost sight of.

The diagnosis was embarrassing. Was there simultaneous affection of the two parts, or a precocious gumma of the tonsil? The author leans to the first view, on account of the simultaneous appearance of symptoms, and the induration. The accidents have developed with an intensity much greater on the side of the throat.

4. *Chancre of the Tonsil.* A woman, aged thirty-five, came with an ulceration of the throat, presenting all the characters of a syphilitic chancre. Three weeks

before she stated that she had had a white and caseous concretion extracted from the tonsil with a steel instrument. She had frequently had attacks of tonsillitis, with retention of caseous matter in the glandular crypts, and it was to this operation that she referred the actual condition. Syphilis was clearly confirmed by the appearance of a typical roseola and secondary symptoms in the larynx. The person suspected of communicating the disease was examined and found to be suffering from mucous patches in the throat.

5. *Chancre of the Arch of the Palate.* A man of forty presented himself with trouble of speech, which he believed to be due to a perforation of the palate. The voice was nasal, and there was difficulty of swallowing, liquids returning through the nose. There was fever, loss of appetite, and general malaise.

A tumour of the left side of the arch of the palate was seen between the uvula and the anterior pillar. The palate here formed a rounded mass, red, and in the centre of which was a sort of indurated nucleus, the size of a small nut, with an ulcerated surface of about one centimètre, of greyish and pultaceous appearance. Except for this ulcer one might have thought of diffuse abscess of the palate. Posteriorly there was felt on digital examination a slight relief, corresponding to the indurated part of the anterior surface. There was adenitis of the sub-maxillary region of the same side, limited, but hard. There was no fever.

The origin of the lesion was dated back about a month, and attributed to using the pipe of an affected comrade. There was no lesion of the genitals or skin. Under specific treatment the condition improved, and as the patient was careless, and came irregularly, cure was slow. In the second month there was only a slight white surface remaining, of cicatricial appearance at the ulcerated surface. There was no longer any difficulty in swallowing. Two months later the patient, who had badly followed the treatment, came back with mucous patches of the mouth and anus.

6. *Gumma of the Pharynx.* A railway employé, aged thirty-eight, married, and father of healthy children. No syphilitic antecedents. In March, 1889, he came to the author with cough and expectoration, and especially with trouble in deglutition. The first symptoms had appeared not more than three months previously. The voice was slightly nasal. An oval tumour five centimètres long and two centimètres broad was seen on the posterior wall of the pharynx on the left side, parallel with the posterior pillar. The colour of the mucous membrane was pale white. A certain resistance to touch was felt, and no trace of fluctuation. No deviation of the spine; no projection of vertebrae; no lesion of neighbouring parts, and not the least trace of old ulceration of the throat or skin. The patient had slight bronchitis, but no trace of tuberculosis. Cold abscess suggested itself, but the consistence of the tumour, its indolence, and the good condition of the patient left the author undecided between the diagnosis of this and gumma, although the patient had never to his knowledge had a chancre or other syphilitic lesion. Under protiodide of mercury and iodide of potassium the tumour diminished in fifteen days, and shortly afterwards disappeared. Two years afterwards the patient had no recurrence.

7. *Gummata of the Pharynx and the Cranial Periosteum.* A man of thirty-five, of good health; two gonorrhœas, one orchitis. He remembered no syphilitic attack. He came to the author for difficulty in swallowing, which had existed for some weeks. He was pale, emaciated and anæmic, attributed to his occupation (hotel keeper). On the posterior wall of the pharynx on the left side was a tumour the size of a nut, elongated, and filling almost the space limited by the edge of the palate, the anterior pillar, the base of the tongue and the mid-line of the pharynx. The colour was red, with vascular striae on the surface.

There was marked resistance without fluctuation; it was of uniform consistence, without thickenings or induration. It projected about $1\frac{1}{2}$ centimètres at the most prominent point. A small gland was enlarged in the submaxillary region, and a similar one existed on the right side, though the pharynx was normal on that side. Diffused redness of the larynx existed, with thickening of the left ventricular band, but no ulceration. The left cord, a little red, imperfectly approached the mid-line. The arytenoid cartilage was not enlarged. Voice a little raucous. Sirop de Gibert was administered. The first visit of the patient was in August, 1889. At the end of September the condition of affairs was not altered; four grammes of iodide were given daily. At the end of October the patient pointed out towards the vinciput a soft tumour, the size of a small mandarin round, and which had grown rapidly within three months. It was sessile on the cranial bones, had a semi-elastic sensation without fluctuation.

The swelling of the left ventricular band had increased and the arytenoid was enveloped in the tumefaction, and the movement of the cord was still more impaired. The state of the pharynx was just the same. Five grammes of iodide daily were administered, and the author began to suspect malignant disease. Prof. Tillaux believed it to be generalized sarcoma. The patient's condition got worse—headache, torpor, and impossibility of following his occupation.

The patient went to Switzerland, saw many physicians, submitted to various plans of treatment, then came to Dr. Jonquière at Berne, who suspecting syphilis prescribed iodide and gave mercurial injections (dose and preparation not known). Under this treatment improvement rapidly followed, the cranial tumour and the lesion of the larynx disappeared. The tumour of the pharynx softened and ulcerated, a little pus exuded from it, but it diminished in turn, and under cauterizations of nitrate of silver and specific treatment (twenty-four injections) the patient was completely cured in six months. Seen by the author the next year, there was no trace of tumour of the cranium or pharynx, or of any laryngeal lesion.

S. Old Syphilis of the Larynx. Fibrous Polypos. A man of thirty-seven, in good health, never having had any complaint, in 1876 contracted syphilis. An insufficient treatment was followed for three or four weeks. In 1871 the patient had had a chill with hoarseness lasting two years. Iodide in large doses had been given. The voice did not reappear, and he came in 1880 to consult Krishaber. He was then absolutely aphonic, and had frequent attacks of coughing. Krishaber had made several galvano-cauterizations. The voice returned a little raucous, but sufficient some months later. In 1882 a fresh aphonia occurred. A physician at Buenos Ayres removed a small piece of laryngeal tumour. The voice returned at the end of some months. No internal treatment was given. For six months the patient had felt a little trouble in respiration, then aphonia gradually recurred. In May, 1889, this was absolute, and there was dyspnoea on walking quickly or mounting stairs.

Cicatrices of old ulceration were visible on the tongue. The epiglottis was thin and curled in part on its left edge. All the larynx was of greyish-white colour, thickened, infiltrated, and as if sclerosed. A voluminous infiltration existed in the arytenoid space. The right arytenoid appeared to have been dislocated forwards and inwards. The vocal cords were badly distinguished from the ventricular bands, and on attempts at phonation both parts, lower and upper, approached simultaneously. A large tumour of the volume of a nut was inserted by a large pedicle on the anterior commissure below the insertion of the left vocal cord. This fell below the cords and was carried upwards on expiration. It was of whitish-grey colour, like the adjacent tissues, and pyriform shape. The general health was satisfactory and there was no pulmonary lesion. It was impossible to

anæsthetize the larynx and throat with cocaine, profuse salivation at once occurring. After educating the patient, the author succeeded at last in extirpating the tumour, and Prof. Hayem, who examined it, pronounced it to be formed mostly of fibrous tissue, in which were some adenomatous tubes. There were no tubercle bacilli to be found in the sputum. The respiratory troubles were suppressed at once, but the voice did not return; the vocal cords remained thickened, and were transformed into sclerous tissue, and the articular movements were badly performed, and the cords badly approximated.

The author proposed to remove the vegetating tumour filling the inter-arytenoid space, but lost sight of the patient, who desired to undergo a course of treatment at Aix-la-Chapelle.

Dr. GOUGUENHEIM recorded three interesting cases from his clinic.

1. Two cases of chancre of the tonsil—one in a man, the other in a woman. In the first case there was hypertrophy, ulceration, glandular enlargements, and secondary symptoms.

In the second case, with hypertrophy, induration, and ulceration there were no secondary symptoms.

In both cases hard œdema of the tonsil persisted for long.

In another case he saw a very hard syphilitic tumour, two or three centimètres long, movable in the pharynx, and situated behind the posterior pubis. It was extirpated but recurred, was removed with the hot snare and the patient cured.

He remembered also a case of polypoid tumour of the larynx, refractory to all internal treatment, and which he found it necessary to extirpate.

Foreign Bodies and Cornified Productions of the Pharynx in Pharyngo-mycosis. Action of Iodated Chloride of Zinc on Leptothrix Buccalis. By Drs. NABIAS and SABRAZÉS.

Pharyngo-mycoses result generally from the colonization upon the tonsils and base of the tongue of a parasite, the *leptothrix buccalis*. Specialists know how tenacious and recurrent is this affection. The explanation of this parasitic proliferation on the tonsils is variously described; normally it lives as a saprophyte in the mouth, and it is not obvious what conditions of the host should be modified in order to make this inoffensive organism pathogenic. Catarrh, rheumatism, tonsillar hypertrophy, sepsis, bad dentition, have been invoked as etiological factors.

The authors have studied two specimens from patients of Dr. Lichtwitz affected with pharyngo-mycosis. They were two small, whitish lumps, with a hard nucleus surrounded by irregular masses of false membranes. They were removed by forceps, the one from a tonsillar crypt, the others from the base of the tongue.

Threads of *leptothrix buccalis* were found to form the membranes, when treated with Gram's iodo-iodated reaction, with a drop of hydrochloric or acetic acid, or, better still, with the iodo-chloride of zinc test so common in vegetable histology. From these two cases and another of mycosis of the base of the tongue, the authors find that microscopically there are bundles of leptothrix surrounding sometimes a foreign body and at others a cornified production. They suggest that these corpuscles have favoured the location and increase of the parasite. The foreign body sometimes resembles the endocarp of an apple or pear cut through the middle, two superimposed lamellæ limiting an angular excavation, and found microscopically to be of sclerous fibres. In the second case there was a series of cornified lamellæ disposed round a central cavity. The portions of dental tartar on the pieces produced at the fourth and fifth day of culture an abundant vegetation of leptothrix. It is easy to understand that the endocarp of one of these fruits accidentally implanted on a tonsil may, by reason of the fleshy portions of the mesocarp adherent to the surface, constitute a point of development for the leptothrix.

Alimentary particles accumulating round the foreign body may play the same rôle. In ruminants a grain of wheat may also, in the throat, be the origin of a mycosis.

In the case of leptothrix of the base of the tongue the foreign body was of buccal origin, being an epithelial proliferation, with horny transformation developed probably on the base of the tongue.

The following preparation is recommended for the study of this mycosis :—

Chloride of zinc, fused	95 grammes.
Distilled water	50 „
Iodide of potassium	140 „
Iodine	7.50 „

The chloride of zinc is dissolved hot in distilled water. The iodide is added drop by drop, forming a precipitate which dissolves on boiling; add the iodine, and stir to complete solution. Filter, and place in a coloured flask, and cork with emery.

Leptothrix under this reaction is coloured like grains of starch, viz., deep blue and nearly black. The reactions obtained by the author dissipate the idea of cellulose in leptothrix. Gram's solution colours leptothrix and does not affect cellulose, and the blue reaction of sulphuric acid and iodine on cellulose is not obtained on leptothrix. What is coloured in leptothrix is not a cellulose wall, but of a starchy nature. Microscopically there is not a continuous coloration, but a staining limited to small cylinders or separate granulations separated by clear spaces.

Treating a fresh preparation of leptothrix by sulphuric acid for about half an hour, and then staining by iodine, it is clearly seen that the filaments present a colourless wall and slightly violet contents, with clear spaces corresponding to the segmentation of the leptothrix.

A drop of the iodated zinc solution placed on a fragment of pharyngo-mycosis produces instantly a characteristic black colour. Grains of starch take this colour also, albuminoid particles are coloured yellow.

The treatment of a little dental tartar by the chloride of zinc reveals, if the parasite is abundant, black streaks on a yellow ground, which are leptothrix alone or associated with grains of starch from the gums.

This reaction facilitates the research of leptothrix, not only in mycosis but upon the teeth, where it contributes to the formation of tartar, precipitating the alkaline salts of the saliva. They develop with great rapidity. They are found even in old cadavers, and the authors have found them on the teeth of an Egyptian mummy, and Miller had done the same.

In a case of caseous coryza from Dr. Moure's clinic the authors have also found a filamentous bacterium differing from leptothrix only by its smallness, and which was not the bacillus amylobaster of Van Treggen.

Other parasites of the mouth and throat—thrush, for example—do not colour with blue by iodine.

Leptothrix coloured by iodine, and to a less degree by iodated zinc, lose their colour quickly, and are difficult to mount in balsam.

Permanent preparations may be obtained by mounting in glycerine. They may be preserved, stained by methylene blue and mounted in balsam.

Iodo-chloride of zinc arrests the development of leptothrix, and is indicated topically as treatment for pharyngo-mycosis, but it is scarcely suitable for dental tartar by reason of its acidity acting on the enamel. Other iodine preparations which destroy leptothrix are preferable in hindering the formation of tartar and preserving the whiteness of the teeth.

REVIEWS.

Jurasz (Heidelberg). — *Die Krankheiten der oberen Luftwege. Klinische Beobachtungen und Erfahrungen gesammelt in der ambulatorischen Klinik für Kehlkopf Nasen und Rachenkranke.* [{"The Diseases of the Upper Air-Passages. Clinical Observations and Experiences collected from the Clinic for the Diseases of the Larynx, Nose, and Naso-Pharynx."}] Second and Third Parts. Heidelberg: Carl Winter, Universitäts Buchhandlung. 1892. Pages 527.

THE first part of this interesting work was reported upon last year in this Journal. The first chapter of the second part treats of congenital and acquired anomalies of the pharynx, recording some rare and interesting observations. The observations on acute and chronic catarrh of the pharynx and retro-pharynx do not differ from those of other authors. The treatment was astringent. Only in cases of pharyngitis retro-arcualis the astringent treatment did not suffice, and strong cauterizing by trichloroacetic acid or the galvano-cautery was performed. Hypertrophied tonsils are removed by a tonsillotome, or, in cases in which it is not possible to apply the instrument, by a knife. Adenoid vegetations are removed by the "Hohlmeiselzange" of Michael without any narcosis. Recurrences have been observed in three cases. Retro-pharyngeal abscess has been observed in adults in ten cases. Of interest is the successful treatment of pharyngo-mycosis leptothricia by brushing with a solution of nicotine; in another case by smoking cigarettes. Of two cases of syphilitic stenosis of the pharynx, one was improved and the other cured by the galvano-cautery and dilatation. Of eighty neoplasms observed, forty were tumours of the naso-pharynx; seventeen of the soft palate and uvula; nine of the arcus; seven of the tonsils; five of the posterior pharyngeal wall; two of the laryngo-pharyngeal space. One of them was a sarcoma of the dorsal face of the soft palate, of the size of a walnut, and was removed by Michael's forceps, and the base destroyed by the galvano-cautery. Two years later there had been no recurrence. Struma accessoria stenosing the glottis was observed in two cases.

The third part treats of diseases of the larynx. In the first chapter, referring to congenital and acquired anomalies, some interesting cases are reported. Acute and chronic catarrh are extensively treated of. Tuberculous neoplasms have been observed in eight cases; miliary tuberculosis of the larynx in three cases. The author treats tuberculosis with cod liver oil and creosote, and locally he applies the surgical treatment of Krause and Heryng with good results. Laryngeal lupus was observed in five cases, and is treated only internally by cod liver oil. Actino-mycosis was observed in one, and abscesses of the epiglottis in two cases. Fracture of the cricoid cartilage, caused by compression in a quarrel, is extensively described. The patient, fifty-seven years old, is completely cured. The same favourable result was obtained in a case of primary

perichondritis of the larynx. A piece of bone was removed during narcosis from the larynx of a child, twenty-two months old, *per vias naturales*, and a piece of money was removed from the giottis by the aid of cocaine with laryngeal forceps. The reports upon some hundreds of benign and malignant neoplasms must be read in the original. The author says that, if possible, operation by the natural passages should be tried in commencing cases of malignant neoplasms, especially when they are sarcomata. The carefully-written chapter on neuroses should be attentively studied by everyone who treats of this subject. The book concludes with an account of diseases of the trachea. Of special interest here is a case of angio-sarcoma of the trachea, diagnosed by the mirror, and removed by crico-tracheotomy. By the same operation in another case the shell of a nut, and in another a piece of bean, were removed from the trachea. Stenosis of the trachea was observed in sixty-eight cases. *Michael.*

Atlas der Kehlkopf Krankheiten. By ROBERT KRIEG (Stuttgart). ("Atlas of Diseases of the Throat," containing 345 figures, 37 chromo-lithograph plates, and 25 drawings.) Stuttgart: Enke. 1892.

THE author says in the preface that he will not, as is usually done in similar works, merely give the reproduction of so-called typical cases, and only one drawing of a case, but will reproduce cases which are not so characteristic, and also such as are of uncertain diagnosis, because such occur much more frequently, and are very important in practice. He also gives several pictures of one case, to show the progress or the cure of the disease, and the effects of treatment. When we examine his work we must admit that he has fulfilled what he has promised in a very excellent manner. He has drawn all the pictures himself with great ability and an effective realism. He could thus draw them at each sitting, and so reproduce cases which could not be allowed to go untreated or to wait the time of an artist. The first table shows the normal larynx in several positions, and some congenital anomalies. Tables 2 and 3 show characteristic examples of anæmia, hyperæmia, hæmorrhage, and œdema of the larynx. Two cases of perichondritis idiopathica are reproduced on the fourth table, each in four drawings, to show the progress and relative cure of the disease. The histories of the cases are also of special interest. Chronic catarrh, pachydermia, and the special diseases of singers occupy tables 5 and 6. The neuroses are reproduced on the tables 7, 8, and 9. It must be said that the first nine tables are the most interesting and the most original of the work, because the commoner forms of neurosis and catarrh have up to now not been treated in any work in so careful a manner.

Comparatively few cases of neoplasms are reproduced, but amongst these are certain rare growths, such as fibro-myxoma of the epiglottis (table 10) cyst of the left ligamentum ary-epiglotticum and pharyngo-epiglotticum (table 11). The author is right not to have laden his book with neoplasms, because this chapter is treated with special detail in all other atlases. Amongst the cases of syphilis (tables 15 to 19), we find some examples of colossal destructions by hereditary lues (table 19). Amongst the cases of tuberculosis (tables 20 to 30) is one of total

destruction of the epiglottis (table 21). [The Reporter has observed a similar case in which there was a combination of lues and tuberculosis.] There are also some instructive cases of the hypertrophic form of tuberculosis, tuberculous tumours, and adhesions (table 27) of perichondritis and laryngeal fistulæ (tables 27, 28, and 29). On table 31 there are eight pictures of a case of lupus improved by treatment with tuberculin.

On the 33rd and 34th tables are pictured stenosis of the trachea by compression of a goitre, and by cicatrices of tracheotomy wounds. Table 35 reproduces a case of herpes laryngis and pharyngis of exquisite beauty. The interesting history of the patient who suffered with recurrent severe herpes, and died from cirrhosis hepatis, must be read in the original. The last two tables show cases of pharyngo-mycosis benigna, pemphigus, foreign body, traumatism from suicide, and congenital diaphragms.

The lithographic pictures, executed by Mr. Erkstein, are done in an excellent manner, and reproduce the drawings of the author very truly. The publisher has also done his best. The paper is the best vellum, and the book is enclosed in a fine original leather binding. *Michael.*

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CLINICAL NOTES.

**A CASE OF PHTHISIS OF THE LARYNX AND LUNGS, terminating in
Epithelioma of the Larynx.**

History of Syphilis Nineteen Years previously.

By R. NORRIS WOLFENDEN, M.D. Cantab.,

Physician to the Hospital for Diseases of the Throat, Golden Square, London.

THE patient, a man, T. N., aged forty-six, applied at the Throat Hospital on December 2nd, 1890, complaining of difficulty of swallowing, which had commenced first in March of that year. He was also troubled with an excessive secretion of saliva and thick mucus, which became especially troublesome at night-time. In May, 1890, he had seen a medical man, who appears to have prescribed for him iodide of potassium. The throat had been continuously getting worse up to the time of his coming to the Throat Hospital in December, 1890. At this time a history of an attack of syphilis nineteen years previously was obtained. The patient was a man of rather over medium height, pale in complexion, and spare build. He had not up to then been losing flesh, he had no cough and no expectoration, had never spat blood, and had no night sweats. He had dysphagia. An examination of the chest produced a negative result so far as any indication of phthisis went. There were no signs on the body of active syphilis. Nevertheless, the larynx presented a picture typical of phthisis in the pyriform-shaped œdematous swellings of both ary-epiglottic folds, and some enlargement of the ventricular band on the left side. The swellings were pale red, and nowhere nodular. The

epiglottis, though pendulous, was not thickened. The patient's weight was fourteen stone. The appearance of the larynx at this date is represented in the following diagram. (Fig. 1.)

Typically tubercular-looking, it was ascertained also that a sister of the patient had died of consumption.

During the month of December he was treated with frictions of lactic acid to the larynx, pine inhalations, iron and strychnine, and later with iodide of potassium (v. grs., t.d.s.) internally.

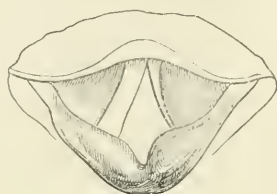


FIG. 1.

On December 30th the larynx presented pyriform swellings of both aryepiglottic folds and swelling of the left ventricular band, somewhat hiding the vocal cord, all pale red and œdematous-looking. The right cord was uniformly pink in appearance, the ventricular band unaffected. The epiglottis had now become involved, and its left edge was curled and thickened. A small ulcer was also observed behind the left arytenoid cartilage. (Fig. 2.) A week afterwards he was ordered cod liver oil, cocaine lozenges to relieve the dysphagia, and the parts were freely scarified and



FIG. 2.

lactic acid rubbed in. During this period he had rather gained—two or three pounds—than lost weight. He became now troubled with a tiresome cough. The sputum, having been examined, was found to contain tubercle bacilli. The treatment by scarifications and lactic acid was continued without producing any great improvement, except that dysphagia seemed to be a little less.

On February 2nd the right pulmonary apex presented undoubted signs of phthisis. There was slight dulness, prolongation of expiration, and a few moist crepitations were heard over the infra-clavicular region. The left side was free from symptoms. The iodide was increased to gr. x., t.d.s., and the scarifications were continued, lactic acid of sixty per cent. being frequently rubbed in.

On February 10th considerable œdema of the left glosso-epiglottic fold and of the left edge of the epiglottis existed. The left cord was invisible from the swelling of the ventricular band. The right cord was red, but not swollen. There was less œdema of the ary-epiglottic folds, but more of the inter-arytenoid commissure. The ulceration had disappeared.

The iodide was combined with liquor hydrarg. perchlor., ʒss., t.d.s., and was increased to doses of gr. xv., t.d.s.

On February 24th it was noted that the moist sounds on the right side were more widespread, and were heard also at the left apex. The patient had lost thirty pounds in weight during the last month, and the dysphagia was increased. The œdema of the epiglottis, and ary-epiglottic, and glosso-epiglottic folds persisted without improvement.

Living at a distance, unable to get sufficient nourishment, and the treatment being apparently ineffective under the conditions of his visiting the hospital as an out-patient, he was advised to enter the hospital as an in-patient.

This, in consequence, he did, on March 12th, 1891. At this date, in addition to great swelling of the left ary-epiglottic fold, which almost completely hid the entrance to the glottis from view, the left ventricular band, and the vocal cord, there was a dirty-looking ulcer over the left arytenoid cartilage, a papillomatous-looking outgrowth of the left edge of the epiglottis, and considerable œdematous thickening of the whole epiglottis. A further examination of the sputum showed the presence of tubercle bacilli, and the condition of the chest remained about the same.

The treatment now adopted consisted of iodide of potassium, gr. xv.; liq. hydrarg., ʒss. in water, ʒi. t.d.s.; vapour of menthol; insufflations of morphia, $\frac{1}{4}$ gr. before meals; later, dusting the larynx with iodoform and morphia ($\frac{1}{16}$ gr.) daily; vapour of creosote, and steam sprays of benzoate of soda, ten per cent., for half-an-hour every three hours, to disembarass the larynx and the throat of the thick mucus, which was troublesome to the patient.

During the whole of this time, from March 12th to June 12th, 1891, the patient's larynx was subjected to frictions of lactic acid, commencing with twenty per cent., and finally reaching eighty per cent., and frequent scarifications were made into the œdematous parts with Heryng's knives.

On April 6th the œdema had greatly disappeared, the papillomatous-looking outgrowth of the epiglottis had greatly diminished, the patient swallowed much better, and felt more comfortable.

On June 12th only very slight swelling remained in the larynx, and no growth remained. The right arytenoid was only slightly swollen, and the right cord was seen to move freely. The left aryteno-epiglottic fold was a little more swollen than its fellow, and the left ventricular band also a little enlarged so as almost to hide the vocal cord. The epiglottis was now free from œdema and growth; at both apices crepitations were heard. The patient, who now left the hospital, had gained nine pounds during the last three weeks. At the end of the month he was found to weigh thirteen stone five pounds, and on July 7th he reported that he was very much better,

and could now walk ten to twelve miles without great difficulty ; he could swallow anything without pain, and had no cough. (Fig. 3.)

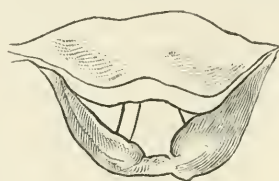


FIG. 3.

Laryngoscopically it was found that some swelling of the left ary-epiglottic fold and ventricular band still persisted, and frictions of lactic acid (eighty per cent.) were therefore still continued once a week at first, afterwards occasionally, on the patient's irregular visits to the hospital.

Up to this time the improvement had been continuous. There could be no doubt that the condition was one of tuberculosis of the lungs and larynx, the evidence of which was the apical changes in the lungs, the expectoration of tubercle bacilli, and the typical laryngoscopic appearances of pyriform swelling of the ary-epiglottic folds, œdema of the epiglottis, and slight ulceration, *all of which healed nearly perfectly under lactic acid treatment*, with such great improvement in the general health that the patient thought himself well. This improvement lasted until November, 1891, a period of five months from his discharge from the wards.

I was for several months absent from the hospital, and subsequently learnt that at his visit on November 17th, 1891, he reported that he suddenly began to get worse, and that dyspnoea became troublesome. On the 22nd December, 1891, tracheotomy had to be performed. It was reported that a marked swelling of the left ventricular band resembling an epitheliomatous growth had appeared, which increased until dyspnoea occurred, necessitating tracheotomy, which was finally determined upon in consequence of the patient coughing up clots of blood, one of which nearly suffocated him. On January 11th, 1892, the larynx, in addition to the same pyriform swellings of the ary-epiglottic folds, presented a marked nodular epitheliomatous-looking mass of the anterior portion of the left ventricular band, and another of the anterior aspect of the ary-epiglottic fold of the left side. (Fig. 4.)

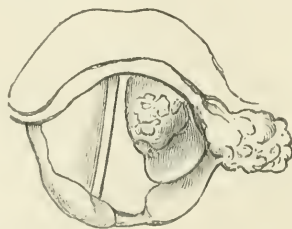


FIG. 4.

A piece of this growth was removed with a snare, and reserved for microscopical examination. The condition of the larynx and external parts presented on April 5th, 1892, a markedly malignant appearance. The larynx at this date was so filled with œdematous swelling, especially of the left side, that nothing of the interior of the organ could be seen. There was a large, hard and globular swelling of the thyroid gland, and pains existed in the left side of the neck, shooting into the ear. A fortnight later there was a large mass of enlarged and hard glands on the left side of the neck, and for the previous fortnight there had been frequent severe hæmorrhages from the larynx.

On April 26th the glands in the neck had greatly increased in size, and there was cancerous ulceration all round the opening into the windpipe, with fœtor. The patient was seen for the last time on May 31st, 1892, when his condition was pretty much the same as on his previous visit (April 26th), the parts round the tracheotomy tube being further ulcerated, a marked degree of general emaciation existed, and it was evident that the end was near. As nothing has been since heard of the patient, it is presumed that he is dead.

The history of this case is exceptionally interesting. Briefly reviewing its progress, it appears to have commenced in March, 1890, when he was treated by a medical man, who, without examining the larynx, prescribed iodide of potash, on account of a history of syphilis nineteen years previously. For nine months the patient appears to have become gradually worse, until he first attended the hospital as an out-patient, presenting then a condition typically phthisical, both as far as laryngoscopic signs went, and the symptoms of involvement of the lungs. From December, 1890, to March, 1891, this condition showed gradual and progressive deterioration while under treatment as an out-patient, but underwent very remarkable improvement even to the point of nearly complete cure of the larynx during the three months from March to June, 1891, while treated as an in-patient. A period of quiescence of from four to five months then occurred, when active changes in the larynx again became observable, with the undoubted picture of malignancy.

What was the date of the cancerous invasion of the larynx is doubtful, and whether cancer existed side by side with tuberculosis, or whether a tuberculous larynx was subsequently attacked and invaded by cancer. It seems scarcely credible that cancer can have invaded the larynx before the autumn of 1891, or the laryngeal condition of œdema and infiltration would not have almost entirely yielded to anti-phthisical treatment (curetting, etc., and lactic acid), and it is more credible to imagine that cancer subsequently attacked a tubercular larynx.

A piece of the growth that was removed from the left ary-epiglottic fold with a cold snare in January, 1892, was afterwards submitted to Mr. R. Lake, F.R.C.S., pathologist to the Throat Hospital, for examination, and his report was as follows :—

“The growth is a squamous epithelioma, and shows in the tissue
“close to the unstained spot in the parallel section a patch of tubercular
“tissue. Though no giant cells are to be seen, numerous lymphoid
“corpuscles are present.”

RECENT METHODS OF OPENING THE MASTOID ANTRUM.

By WILLIAM ROBERTSON, M.D.,

Surgeon, Throat and Ear Hospital, Newcastle-on-Tyne.

IN spite of all that has been said for the efficacy of excision of the drum-head and ossicles in the treatment of chronic otorrhœa, a very large percentage of operators have found it fail in its desired end. From a consideration of the conditions to be expected in chronic otitis media purulenta, such a result might very readily have been anticipated, more especially if the inflammatory process has existed in the tympanum for any length of time, and has proved rebellious to routine measures of treatment. In such cases the mastoid antrum has almost to a certainty become involved, and is perpetuating and propagating the mischief in the middle ear, as well as enlarging its own limits. Practical results prove that under these circumstances mere excisions of the drum-head and ossicles falls very far short of effecting anything beyond an improvement strictly confined to the close neighbourhood of their site at the most, and even this is but temporary, soon giving place to the former state. Purulent irritating discharges, elaborated in the antrum, course over the tympanic mucosa, and escape by the meatus should egress in this way be open. But if through swelling of the mucous membrane or any other obstacle (inspissated *débris*, etc.) the passage from the antrum into the tympanum is obstructed, then the pent-up products may point in other directions, *e.g.*, towards the dura mater or outwards into the mastoid cells, if such exist. Obviously, in view of such contingencies the mere excision of the drum-head and ossicles falls very far short of the operative requirements demanded.

In any given case of chronic otorrhœa, if the symptoms of vertigo, deep-seated pain in the ear, and perhaps occasional vomiting be present, with, besides, the condition of deep injection of the tissues at the inner end of the meatus, together with discharge, etc., then it may be accepted that irritation of the dura mater is being caused by pent-up products in the antrum pointing in that direction, even though the mastoid shows externally no sign. To meet the requirements of such a case, nothing short of opening and draining the antrum will suffice. The mere fact that in many of these cases there is no sign of danger displayed externally over the mastoid area has, it is to be feared, often led to a disregard of the dangers indicated. If it were more widely appreciated that in a very large proportion of such cases the external wall of the antrum is composed of dense bone quite up to the limits of the space, and thus forms an insuperable obstacle to escape of discharge in this way, and in consequence throws its tendency to escape in the way of highly vulnerable structures, then the propriety of early operations would be more freely acted upon. How to open the antrum without risk, and at

the same time effect adequate drainage, becomes a question of the first importance.

In more than one respect can exception be taken to Schwartze's method of operating. In the cases to which we more particularly refer there are no sinuses opening externally, which may be safely followed up to the antrum. To proceed to operate according to Schwartze's method there is absolutely no certainty that during the procedure the sigmoid sinus will not be injured, no matter how carefully it is conducted. Clinical records of the operation abound with notes—*e.g.*, that after section of the mastoid to the depth of two centimètres the chisel or gouge was laid aside; that at the time of the operation there was no communication between the wound and the antrum effected, etc.; all such remarks and occurrences going to prove that even in the most carefully planned operations unsuccessful results frequently do occur. Then, after all, does such perforation when effected adequately drain the cavity? The rather large number of relapses after the operation, and when due time has been given for repair, would seem to indicate failure. The bridge of bone left between the section and the meatus is no doubt inimical to perfect drainage, while this part of bone itself may often be diseased at its inner end, and thus account for failure.

Two results desired to be effected—either to thoroughly open up the antrum, and then by keeping it open to endeavour to encourage granulation tissue growth, and thus abolish the cavity; or again to lay its cavity freely open externally, and with the tympanum, so that one large cavity is established—are kept in view in modern treatment. Neither result can be hoped for from Schwartze's method of operating. Attention is now being attracted to more recent methods of operating, from which results as above may be expected. Such an operation may be described as follows:—

An elliptical incision is made in the line of junction of the auricle with the mastoid down to the bone. The auricle is now forcibly dragged forward with retractors, and a raspatory is used to lift the posterior (cutaneous) wall of the meatus well forward from the bone. The tissues over the mastoid are now freed and lifted posteriorly as far as may be. A bent probe is now used to find out the entrance to the mastoid antrum and realize its direction and extent. This is effected by passing the bent end of the probe along the posterior meatal wall until the bent portion of the probe sinks into the opening of the antrum. By pulling on the probe it is now felt caught in the cavity. Leaving this *in situ*, or in the hands of an assistant, with mallet and chisel, the whole area of the mastoid wall limiting the space (including, of course, the posterior osseous meatus) is chiselled off, following throughout the process the indications given by the probe in the antrum. The delicate part of the operation occurs at the section of the posterior part of the ring of bone in which the membrana tympani is fixed. The presence of the probe in the antrum, however, prevents injury to the semicircular canal lodged in the inner wall of the tympanum. A pair of suitable bone forceps might be used to cut at this depth, could such be made as delicate and at the same time as strong as necessary. Once the cavity is freely opened, any overhanging

ridges of bone can be snipped off. If it is desirable to more freely open up the attic of the tympanum, the soft parts must be pushed aside, and the bone removed. Carious ossicles, etc., can now be removed. Too low section of the posterior osseous wall of the meatus must be avoided, in order that the facial nerve here lodged in its canal may escape injury. Following out the dimensions of the antrum as indicated by the probe, and abiding by this, any such accident is avoidable. Now that all the bone is cleared away, the curette is used to remove all granulations, *débris*, etc., from antrum and tympanum.

A longitudinal section of the posterior wall of the soft meatus through-out its length is now made, and also an effort to fold the flaps on to the bone. The antrum is then lightly plugged with iodoform gauze, and a strip placed in the meatus.

The great safety of this method of operating turns upon the use of the searcher placed in the mastoid antrum, an innovation introduced by Victor Horsley. The great bugbear to operating in the usual way, viz., injury to the sigmoid sinus, is entirely escaped. The cavity cannot possibly be missed, and the searcher *in situ* prevents injury to the facial nerve and semicircular canals, etc., while after the antrum is reached and opened up by the subsequent use of gouge forceps, any remaining diseased structure can be snipped off.

Results : For one thing the external inflammatory œdema, if attendant on the case, much more quickly disappears than after the old operation.

Again, freer drainage being present, the intra-tympanic condition sooner subsides, and with this earlier return of hearing. A speedy disappearance of dural irritation is marked when this is a feature of the case. The operation has proved effective where excision of the drum-head and ossicles has proved abortive.

Subsequent dressing of the wound produced is much less painful, and the course of the case shorter.

MOUTH, TONGUE, PHARYNX, &c.

Fränkel, E. (Hamburg).—*Macrocheilia from Adenoma of the Mucous Membranes of the Lips*. "Langenbech's Archiv," Bd. 44, p. 95.

A PATIENT, nineteen years old, had a very large upper lip, which had increased more and more since his fourth year. Extirpation was performed by Schede. Cure resulted. The microscopic examination showed that adenomata in the mucous glands was present. *Michael*.

Erb (Heidelberg).—*Remarks on Cicatrices of Plaques (Leucoplakia) of the Mouth and its Causes*. "Münchener Med. Woch.," 1892, No. 42.

THIS affection can be caused by syphilis (thirty-six cases), and by smoking alone (thirty-seven cases) ; in most cases by combination of both (sixty-

four cases) ; rarely (eleven cases) it is observed in patients who neither smoke nor have syphilis.

Michael.

Demme (Berlin).—*Two Rare Tumours of the Mouth.* "Monats. für Ohrenheilk.," Oct., 1892.

(1) FIBROMA of the cheek of the size of a walnut. Extirpation and cure.

(2) Papilloma of the tongue. Extirpation and cure.

Michael.

Clarke, Bruce (London).—*Epithelioma of Tongue.* "Brit. Med. Journ.," Feb. 27, 1892.

A GROWTH in a man, at first distinctly gummatous, becoming subsequently malignant and beyond the sphere of operation, it was proposed to try the injection of aniline dyes. Messrs. Marmaduke Shield and Watson Cheyne referred to this practice in their experience as unsatisfactory.

Wm. Robertson.

Reverdin and Buscarlet.—*Macroglossia from an Angioma.* "Rev. Méd. de la Suisse Romande," Nov. 20, 1892.

A child of eight came under observation in April, 1891, for an enormous venous tumour of the tongue, the lower lip, and the left cheek. The tongue lay outside the mouth, enormous and violet-coloured, the lower lip being everted downwards. At birth the child was perceived to have a black tongue, and a patch of the same colour on the lower lip. Towards seven to eight months old the tongue began to grow, and it continued to do so, and at three years of age could not be contained in the mouth, and salivation was constant. There was no trouble in eating or speaking. The swelling of the cheek and lip has been more gradual.

During the last year hæmorrhages had occurred frequently. The child was in good health. The tumour could be seen to be developed in the anterior part of the tongue, which behind appeared to be healthy, and of normal volume. The tumour had no precise limitation, but appeared to extend a little further to the left than the right at its base. It had a general violet-black colour, with black points on a violet or rosy base. There was no pulsation in it.

The lower lip from one commissure to the other was thickened, everted, and dotted with numerous black points, and from behind the left commissure arose a tumour from the skin and mucous membrane, of soft consistence, violet colour, and non-pulsatile.

A diagnosis of angioma was made. It was operated on by previously tying both linguals, two veins on the right side, and one large one on the left ; the facial artery was tied also. On the left side a drainage tube was inserted, sutures of silk used, and dusted with iodoform. Immediately after operation the tongue swelled notably. Six days after, under chloroform, the tumour of the tongue was removed. In the autumn of 1891 the angiomas of the lip and cheek were found to have increased ; electrolysis was employed with doubtful success, and operation was intended, but the parents ceased attendance. A slight return of the growth in the tongue was noticed. The histological examination by Buscarlet showed the growth to be an extremely developed and intra-muscular cavernous angioma. The article is illustrated by two plates. *R. Norris Wolfenden.*

Dunn (Richmond).—*Five Cases of the Pin Sensation in the Throat.* "New York Med. Journ.," June 11, 1892.

THE first case was in a woman aged twenty-nine. The sensation was noticed in the deepest part of the hyoid fossa. There was some accompanying congestion and swelling of the right side of the pharynx, and swelling of the lower end of the right tonsil. Cauterization of these parts did no good.

The second case was that of a girl seventeen years old, and the sensation was felt on the left side of the throat, just behind the upper part of the larynx. Cauterization of a small granulation just behind the left posterior pillar cured the patient.

Two further patients were young men, and the last case was a woman; in all these destruction of granulations cured the condition.

The author thinks that most of these "pin sensations" arise from an acutely inflamed granulation, or a hypertrophy in the lymph chain behind the posterior pillar of the fauces of the side upon which the sensation is felt.

B. J. Baron.

Davidson and Davies (Liverpool).—*Post-Pharyngeal Abscess—Asphyxia—Laryngotomy—Recovery.* "Lancet," Oct. 15, 1892.

A MIDDLE-AGED man appeared to be suffering from tonsillitis, but his mouth could not be opened sufficiently to permit of examination of the throat. There were no inflamed glands. While taking his medicine (salicylate of soda) he had a fit of choking, and was so nearly suffocated that he was apparently moribund. Breathing had stopped, but laryngotomy was performed, and, after artificial respiration, he recovered, some pus welling out by the side of the tube. Next morning the mouth could be opened, and it was obvious that the tonsils were normal, but there was a post-pharyngeal abscess near the middle line, but more to the right side. The movements of the neck were normal, indicating absence of cervical spinal disease. There had been occasional attacks of nose-bleeding, and it was therefore assumed that the abscess was a glandular one, secondary to some inflammatory disease of the posterior nares.

Dundas Grant.

McIlraith, C. H. (London).—*Fatal Case of Asphyxia in an Infant from Foreign Body in the Œsophagus.* "Lancet," Sept. 10, 1892.

A CHILD, aged seventeen months, was brought in a state of asphyxia. While at dinner, and having a piece of meat in his mouth, he had a sudden fit of coughing, following on which he became rapidly blue in the face, and almost stopped breathing. When seen about twenty minutes after the occurrence he had all the signs of asphyxia, with very shallow breathing of a stridorous character. The breath-sounds were feeble over the right lung, and almost absent over the left, and they were accompanied by some inspiratory stridor. The fauces were found clear and tracheotomy was performed. Death occurred in spite of artificial respiration. On *post-mortem* examination, in the Œsophagus, immediately behind the bifurcation of the bronchi, at the level of the fourth dorsal vertebra, there was found tightly impacted a hard piece of gristle measuring an inch and one-eighth long, three-quarters of an inch broad,

and half an inch thick, pressing on both bronchi so as to almost totally occlude the left and partially the right. [How easy to be wise after the event and determine to use a probang in such cases in future !—ED.]

Dundas Grant.

Campbell.—*Clinical Observations and Results of Electrolytic Action in Oesophageal Strictures.* "Med. News," July 9, 1892.

SEVERAL cases of cicatricial stenosis resulting from inflammation are quoted, in all of which electrolysis was of the utmost service. The current was gradually increased from five to twenty-five milliamperes, and the relief to the stricture appears to be permanent. The author considers that we have no method of treatment that can compare with it in these simple cicatricial cases. He has also found that it is much less irritating in its application than bougies are.

B. J. Baron.

NOSE AND NASO-PHARYNX.

Gayton, W. (London).—*Nasal Ointment Introducer.* "Brit. Med. Journ.," March 12, 1892.

A MODIFICATION of Allingham's rectal ointment introducer to suit the nose.

Wm. Robertson.

Braun (Trieste).—*Answer to Professor O. Chiari in Vienna.* "Wiener Med. Woch.," 1892, No. 40.

POLEMICAL article concerning nasal vibrations.

Michael.

Chiari (Wien).—*On Massage Vibrations and Internal Massage of the Mucous Membrane of the Upper Air Passages by the Method of Braun and Laker.* "Wiener Med. Woch.," 1892, No. 36.

THE author has applied the method in some cases of ozæna without any success.

Michael.

Munger, Carl (New York).—*A Modified Gottstein's Curette.* "Med. Rec.," Sept. 3, 1892.

THIS modification is the "heart-shape," with which those who were present at Prof. Politzer's recent meeting in London are familiar. The notch in the heart is intended to adapt itself to the septum, while the lateral lobes enter the posterior nares in order to clear growths from these passages.

Dundas Grant.

Brume.—*Contribution to the Microscopical Anatomy of the Human Nasal Cavities.* "Archiv für Mikroskop Anatomie," Band 39, Heft 4.

THE author has examined the noses of four decapitated persons to determine if there exists a typical olfactory epithelium in man, and, if so, to what extent; further, as to the nature of this epithelium, and the manner in which the olfactory nerves end; further, the differences

between the olfactory and respiratory regions, and the nature of Bowman's glands. Typical epithelium exists in the upper portions of the superior turbinateds and the symmetrical portion of the septum. The olfactory nerve extends over the same space as the typical epithelium. He found also a membrana limitans on the so-called "Riechhärschen." He confirms the bell-shaped cells (Glockenzellen) described by Suchanek. As to the relation between olfactory fibrillæ and olfactory cells, the author was able to prove the existence of a central process combined with sub-epithelial nerve fibrillæ. The olfactory mucous membrane has no basal membrane. It is filled with many cells, and has an adenoid character. Bowman's glands have small ducts; the orifices of the glands have flat epithelium and no mucous cells. The ducts sometimes end in a crypt filled with ciliated epithelium. He never found pigment in Bowman's glands.

Michael.

Oppenheimer (Berlin).—*Rhinitis Hypertrophica and Amenorrhœa.* "Berliner Klin. Woch.," 1892, No. 40.

IN five cases of girls with irregular menstruation, which often ceased for some months, the author found hypertrophy of the turbinateds. Some days after operation, menstruation reappeared, and remained regular. The author believes that there was a relation between the two diseases. [But as menstruation is so sensible to psychical influences we believe that any operation upon any part of the body would have had the same influence.—REP.]

Michael.

Scheppegrell (New Orleans).—*The Treatment of Hypertrophic Rhinitis by Electrolysis.* "New Orleans Med. and Surg. Journ.," Sept., 1892.

THE author has abandoned "chemical cauteries," because of the pain caused, and the difficulty of confining the action to the place intended. With the galvano-cautery a number of deep punctures should be made after cocainization, to get the tissues bound down by cicatrization. The advantage of a sub-mucous operation as opposed to chemical cauterization is that the wound is not an open one, and exposed to irritating discharges and pyogenic germs. In electrolysis we have a means of destroying tissue with the least disturbance of the superficial parts. After one operation most cases show complete removal of the stenosis in eight to ten days; there is no irritation, discharge, or reaction, as the operation is entirely sub-mucous. The operation takes from seven to twenty minutes. A battery of about fifty volts is required. A rheostat and milliamperimeter is required. A "dispersive" and an "active" electrode are required for applying the current. The former should be a thin pliable plate of copper four inches by five inches, backed with mackintosh, and covered with moist absorbent cotton. This is placed on the back of the neck or any other part of the body. The "active" electrode is a platinum needle one and a half inches long, fitted with copper wire two and a half inches long, and insulated by rubber tubing; a light cap makes attachment with the binding cover. The needle is pushed into the turbinated body, and the rubber tubing is pushed over all the needle remaining outside. The current is gently turned on by a rheostat. Under proper

cocainization no pain is complained of, though a stinging sensation is complained of at the 'dispersive' electrode. Both positive and negative currents may be used, but the latter is more convenient. The best result is obtained with a current strength of ten milliamperes applied for ten minutes. If a less current is used, it should be applied longer, but with less than five milliamperes the results are not satisfactory. This is sufficient, however, when the condition is one of hyperæmia with relaxation of tissues. After removal of the needle the parts are touched with collodion to exclude air. The operation is usually sufficient, unless the hypertrophies are very great, the only disadvantage being the length of sitting necessary. For this reason the galvano-cautery may have to be resorted to in some cases. Of forty-four cases operated on, the author has had good results in the majority. Ten cases are related in detail in this paper.

R. Norris Wolfenden.

Starck (Kiel).—*Rhinitis Membranacea*. "Berliner Klin. Woch.," 1892, No. 42.

REPORT of three cases, interesting from the circumstance that two of them succeeded to a fibrinous pleuritis, the third to a fibrinous pneumonia. Bacteriological examination gave no certain results.

Michael.

Watson, Spencer.—*The Influence of Intra-nasal Obstruction on the General Health*. "Brit. Med. Journ.," March 5, 1892.

THE author, first referring to the fact that treatment of nasal obstruction frequently relieves other conditions not obviously dependent upon it, classifies cases of stenosis as (1) partial, (2) complete, (3) temporary and (4) permanent. In some cases headache, migraine, &c., might be due to obstruction of the passages of the secondary cavities of the upper air tract. A case of asthma, due to stenosis, and relieved by treatment of this, was given, and the fact accentuated that operations of a complete character were most desirable on the conditions giving rise to asthma. Hay asthma is not to be thought entirely intra-nasal in origin, but aggravated by intra-nasal lesions. The most common form of stenosis, snuffles in infants, adenoids, and hypertrophic forms of rhinitis, were referred to, and treatment by the knife and snare suggested. The author concluded by stating that suitable treatment of stenosis might prevent convulsions and chest deformity in infants, and that in youth and early life chest deformity, deafness, impairment of speech and mental development were evils attending stenosis, and preventible by its cure, and that in adult life by the relief of stenosis asthma, spasmodic cough, bronchitis, &c., were capable of cure. Dr. Havilland Hall, who joined in the discussion over the paper, demurred to the use of a general anæsthetic where cocaine sufficed, and considered hay fever not so much a question of nasal stenosis as of an undue sensitiveness of nasal mucosa, and undue irritability of erectile tissue of inferior turbinates.

Wm. Robertson.

Watson, W. Spencer (London).—*On the Influence of Nasal Stenosis on the General Health*. "Lancet," Sept. 10, 1892.

Stenosis may be temporary, permanent, partial, or complete. *Temporary* stenosis is attributed to swelling of the erectile tissue of the turbinated bodies under the influence of acute rhinitis, simple chronic rhinitis,

congestive irritation from any cause. The swelling dimples under the probe, and is greatly reduced by cocaine. *Permanent* stenosis is produced by chronic hypertrophic rhinitis, intra-nasal growths, distortions of the septum, etc., etc. When the obstruction is *partial* the question arises as to how far the symptoms are due to irritation rather than obstruction. This may be tested by the amount of reflex disturbance produced by touching the suspected area with a probe, also by the use of cocaine, relief without material diminution of the swelling indicating the presence of an area of abnormal sensitiveness. Several typical cases are described and illustrations are given of the hypertrophic masses removed with the wire-snare and ring-knife. When the obstruction is partial and the symptoms unimportant, the growth being small and easily reached, Mr. Watson advises operating by means of the snare or electric-cautery, using cocaine, and employing the frontal mirror as a guide to the instruments. In cases of *complete* stenosis with much constitutional disturbance he operated by a single operation under general anæsthetic. Asthma was present only three times in some hundreds of cases of chronic hypertrophic rhinitis, and in one in which the asthma had lasted eighteen years a cure was effected by the removal of polypi and the hypertrophied turbinates. In hay asthma he considers the nasal swelling, when present, as an effect rather than a cause, but at the same time the stenosis is a great aggravation, and its removal gives great relief, especially if the use of plugs is persevered with. Reference is made to nasal obstruction in newly-born infants, to the occurrence of adenoid vegetations in early youth and young adult life, and the need for operative relief from the well-known points of view. He insists on stenosis being an important factor in many reflex neuroses, but he would by no means exclude the many other factors, notably the neuropathic element.

Dundas Grant.

Drinkwater, H. — *Asthma from Nasal Disease.* "Brit. Med. Journ.," March 26, 1892.

Two cases of nasal polypus presenting symptoms of asthma, cured after removal of former.

Wm. Robertson.

Hovorka (Wien). — *Congenital Occlusion of one Nasal Cavity.* "Wiener Klin. Woch.," 1892, No. 40.

A PATIENT, thirty-five years old, died from tuberculosis of the lungs. Since his earliest infancy he had had an occluded right nasal cavity. He was born with a deformed nose, and always produced a noise when he respired through it. The examination of the divided head showed that the right nasal cavity was occluded by a concave, strong membrane covered with hairs. The nasal bones were deviated to the right side. The membrane was situated one centimètre behind the nasal opening. There was a deviation of the septum, synechiæ, and a crista lateralis vomeris. The malformation must be looked upon as having arisen during the embryonal period.

Michael.

Reinhold. — *Myxo-Sarcoma of the Nose.* Inaugural Dissertation, Würzburg, 1891.

THE author reports two cases from Seiffert's clinic, and refers to the pathology and therapy of this rather rare neoplasm. The symptoms

resemble those produced by other neoplasms—there are no specific differences. The tumour in most cases is situated on the septum. The diagnosis must be made by microscopical examination. Treatment by galvano-cautery, electrolysis, or by surgical methods. *Michael.*

Woakes (London).—*The Pathology and Diagnosis of Necrosing Ethmoiditis.*
"Brit. Med. Journ.," March 12, 1892.

A RENEWED defence of the author's well-known topic, together with a report, macroscopical and microscopical, of specimens from operation furnished by Dr. Woakes, by Dr. Sydney Martin. The author, in his account of the conditions observed, refers to the first stage of ethmoiditis as characterized by swelling of the body and fibrosis of the covering mucosa. The second stage is recognized by proliferation in the direction of granulation tissue or polypus, and by distension (atrophy) of the bone, now found to contain cavities filled with pale granulation tissue or empty spaces. On cleavage of the mass after rupture, a rarer condition is also described. Necrosis of the bone (the most contested point in the consideration) is insisted on, and referred to in the microscopical report. This condition is found at some part of the wall of the ethmoidal cells, constituting the outer wall of the nasal cavity, and for the dissection of which a special probe is necessary. Such changes are found apart from any in the middle turbinated.

In the discussion that followed the reading of the above paper, Mr. Lennox Browne admitted the occurrence of thickening and degeneration of the mucosa, the development of myxomatous tissue and cysts within the turbinal bones, but characterized the nomenclature as misleading, inasmuch as the usual indications of necrosed bone—stench, extrusion of dead bone, etc.—were absent. *Wm. Robertson.*

Daly, W. H. (Pittsburg).—*An Eligible Method of Repairing a Broken Nose.*
"New York Med. Journ.," Nov. 5, 1892.

THE author lays great stress upon supporting the broken fragments by intra and extra-nasal supports. His method of procedure is as follows:—A piece of soft felt is taken and cut into the shape of the letter X, making the arms of the letter long. This is moistened and moulded to the nose, forehead, and lower parts of the cheeks, after the fragments have been properly adjusted. A piece of sheet zinc or thin sheet iron is now cut into the same shape as the felt, making it, however, slightly smaller. This is punctured round its border and sewn to the felt. Another piece of felt is now taken and applied over the zinc plate. The whole is soaked in a solution of sodium silicate, and moulded over the nose, forehead, and face, and is held in position until it has hardened. A small zinc plate, neatly covered with iodoform gauze, and just large enough to fill the naris and keep the broken fragments in position, is now slipped into either nostril. These plates reach from the anterior nares to the naso-pharynx. The intra-nasal splints should be removed every three or four days, fresh ones being inserted, while insufflations of iodoform are made around the splints every day. The whole is kept in position by variously disposed bands over and around the head. *W. Milligan.*

Wagner.—*Cerebral Disease after Simple Operations in the Nose.* "Münchener Med. Woch.," No. 51. Abstracts in "Int. Journ. of the Med. Sciences," Nov., 1892.

THE author reports a case of fatal meningitis after electric cauterization of the lower and middle turbinates in a male twenty years of age. Severe hæmorrhages occurred on the third day, requiring tamponing anteriorly and posteriorly. It did not appear to come from the wounded surfaces, the eschars upon which had not yet become detached. Fever supervened with intense headache in the frontal region, and more moderate in the occipital region. The tampons were removed at the end of sixty-three hours. The meningitis increased, and pains and stiffness occurred in the cervical muscles and in the right shoulder and arm, and steadily increased. Death ensued a week after removal of the tampon. Wagner refers to a case of fatal meningitis after extraction of a polyp, reported by Voltolini, and to two cases recorded by Quinlan ("Med. Rec.," Sept. 13, 1890; "Journ. Resp. Organs," June, 1890), and calls attention to the circumstance that the middle turbinate was involved in all the four instances. He attributes the hæmorrhage in his own case to thrombosis of the longitudinal sinus, with consequent collateral stasis of the venous blood in the nasal passages, and metastatic transfer of some of its broken constituents in the upper extremity. The complications of meningitis are dependent upon the anatomical relations of the venous and lymph currents. The veins of the upper and middle turbinates empty into the longitudinal sinus through the foramen cæcum, and the foramina of the cribriform plate of the ethmoid bone and the lymph channels of the nose communicate directly with the sub-dural and sub-arachnoid spaces. Hence, infection is carried directly to the meninges by the latter path, and to the longitudinal sinus by the former.

W. Milligan.

Fürst (Leipzig).—*Empyema of the Antrum of Highmore caused by Gonorrhæal Conjunctivitis.* "Archiv für Kinderheilk.," Band 14, Heft 6.

IN a child four weeks old affected with gonorrhæal conjunctivitis the author observed the third day after his birth an empyema of the antrum of Highmore propagated by the ductus lacrymalis. By extraction of two tooth germs the pus was discharged through the alveolus. A large incision was made on the cheek, and followed by discharge of much pus. Drainage was obtained. Death occurred some days later. The *post-mortem* examination showed destruction of the whole upper jaw, abscesses under the temporal muscle, multiple pyæmic abscesses in the lung, kidneys, liver, and cardiac muscles, with pericarditis and pleuritis suppurativa.

Michael.

Meirhof, E.—*A Few Practical Remarks upon the Commoner Affections of the Nose and Pharynx of Children.* "Arch. of Pediatrics," Aug. 1892.

MORE disturbances are produced by diseased conditions of the nose and pharynx in children than in older subjects. These conditions may arise at any period of child life, and may be primary or secondary. The posterior part of the nares and the upper part of the pharynx are the parts most affected. Hypertrophies of the turbinates and deflected septa are seen in children of ten and twelve years, but they are not common

and polypi are still rarer. Affections of the lower pharynx are not so numerous in children as in adults. Obstruction is an important factor in catarrhal affections of children. In the nose it is rare, but may be due to foreign bodies, swelling of the turbinateds or cartilaginous septum (from traumatism) or general congestion, which latter is often the result of obstruction elsewhere, generally the naso-pharynx. Adhesion of the outer wall of the nose to the septum is the result of acute purulent rhinitis of frequent repetition, or of a chronic process where constant contact causes an absorption of mucous membrane and synechiæ result. Diphtheritic rhinitis with ulceration might cause this. The septum on the side of the adhesion is largely developed or deflected towards the adhesion.

Adenoid vegetations are the common cause of naso-pharyngeal obstruction.

Mucus secretion, bronchitis, cough without laryngeal or pulmonary cause, snoring and restlessness, loss of appetite, irritability, impoverished blood, facial chorea, nocturnal incontinence, retardation of mental development, affections of the eye and ear, even hernia follow upon obstructive catarrh of the nose and pharynx.

Deflection of the septum, oftener observed in adults, is a progressive process when caused by injury in childhood.

The hypertrophy of Luschka's tonsil is the most important throat disease of children. The commonest affection is tonsillar. In the majority of children there is simple inflammation with swelling or with exudation. Abscesses and cheesy products are not so common in children, and the effects of tonsillar inflammation are not so severe. Enlargement of the tonsils may cause secondary disturbances, such as otitis, interference with deglutition, nasal respiration and speech, irritation of the epiglottis, adenitis, etc. These secondary disturbances are not due to one cause but many. Enlarged tonsils should be got rid of. The author is convinced that it is through the nose and throat in an unhealthy condition that diphtheria, scarlatina, etc., are introduced into the blood in many cases.

R. Norris Wolfenden.

Watson, W. S.—*A Case of Naso-Pharyngeal Polypus in a Girl—Removal by the Snare and Spring Catch Forceps.* Trans. Med. Soc. of London, Vol. XV., 1892.

In a girl of sixteen and a half a large gelatinous nasal polypus was seen to depend behind the uvula. The left nostril was occluded by polypus. Under cocaine it was removed with a cold wire snare passed through the nostril into the pharynx, where the loop was caught and slipped up to the pedicle of the polypus, the curved end of the pharyngeal catch forceps securing the lower end of the polypus to steady it while the loop was passed round. The growth was then removed, and was two and a quarter inches by one inch in diameter. Along with a piece of growth removed at a previous operation, it would be about double that size, *i.e.*, about three and a half to four and a half inches long. The author thinks the case interesting from (1) the unusual size and situation of the polypus in a young girl; (2) the use of the catch forceps and his own canula forceps as a novel method of proceeding.

R. Norris Wolfenden.

LARYNX.

Burkart (Bonn).—*On the Centripetal Conduction of the Vagus Nerve, especially of the Nervus Laryngeus Inferior.* "Berliner Klin. Woch.," 1892, No. 39.

POLEMICAL article directed against Burger.

Michael.

Chiari (Wien).—*On the Existence of Glands in Polypi and Nodules of the Vocal Cords.* "Prager Med. Woch.," 1892, No. 37.

IN another publication the author has described cysts in polypi (see the report in this Journal). In one of three cases now observed he always found a cyst arise from a gland, the duct of which was closed.

Michael.

Rethi (Wien).—*The Act of Swallowing and its Relation to the Larynx.* "Wiener Med. Presse," 1892, Nos. 16 to 19.

PHYSIOLOGICAL experiments performed by the author gave the following results:—The bolus, being prevented from moving forward, is pressed backwards by the action of the mylohyoidei. The larynx is closed by contraction of all its muscles. Details must be read in the original.

Michael.

Shaw, E. A. (Wakefield).—*Aphasia and Deafness: Cerebral Wasting of the corresponding Cortical Areas.* "Brit. Med. Journ.," Feb. 27, 1892.

THE above conditions were noted in the case of a female (widow) aged seventy-two, supervening on a fit which deprived her of speech and the use of both right limbs. This attack was preceded by an apoplectic seizure from which she recovered, and after which a deafness, from which she had suffered since six years of age, disappeared. With the second seizure deafness returned. (No record of examination of ears.) Amongst other lesions of the several cortical areas there was observed orange-red softening of the superior and part of the middle left temporo-sphenoidal convolutions. The author suggests the term *kophemia* (κωφος, deaf, and φωνη, speech), to express failure of cortical perception for spoken words.

Wm. Robertson.

Bach, James A. (Milwaukee).—*Hysterical Aphonia, with Special Reference to a Plan of Treatment, and a Report of Cases.* "New York Med. Journ.," Oct. 22, 1892.

THE etiology of hysterical aphonia is somewhat similar to that of other hysterical affections. It is less a local than a general trouble manifesting itself locally. In many cases no definite cause is apparent. The voice may disappear either gradually or suddenly. Central nerve stimulation appears to be lost, and the muscles of phonation are practically paralyzed. This condition is frequently accompanied by paresis of the tongue and pharynx. In addition, partial or complete anæsthesia of the larynx is generally present. In some of the severe forms of hysterical aphonia

patients lose their power of whispering, even although the tongue retains its power of motion. Since whispering, however, is not a function of the vocal cords, there is no good reason for such a complication unless these organs be paralyzed, which, however, is generally not the case. Patients can usually be convinced of this fact, and hence confidence is gained. The treatment the author advocates is to teach the patient inductively to regain control of the larynx, to innervate properly the muscles of the vocal cords, and so to produce voice. When inability to whisper is apparent the patient should be directed to inhale deeply, and to blow out again with a puckered mouth, and after this to blow with the tongue pressed against the upper teeth, producing the sound "s." Should the patient try to evade the production of whispered sound in this manner by holding his breath, a sudden pressure upon the chest, sufficiently hard to expel the air, will at once get him over this fault, and he will in a few moments be able to whisper. In order to get the patient to produce the first tone some mechanical or chemical irritation of the larynx is required so as to excite cough. When intra-laryngeal anæsthesia is great some more irritating fluid—*e.g.*, warm water—may be injected into the larynx in order to produce cough. In connection with this cough, it is well to make the patient close the mouth, and produce a rasping movement in the throat, as though trying to free it from mucus, while at the same time the physician, supporting the larynx with his hand, exerts some lateral pressure. After having repeated the cough five or six times the patient will have gained sufficient control of central stimulation to produce a cough. It now becomes a simple matter to continue this cough, and to produce the vowel "a" at each effort; then "c," and so on until all the vowels have been coughed. Consonants may then be added—*e.g.*, "ad," "ed," "id," etc. In this way the patient is gradually taught to utter words, and then sentences. Several cases are reported to illustrate the satisfactory results attained by practising this procedure.

W. Milligan.

Green, J. T. (Tucson, U.S.A.).—*Absolute Rest of the Parts the Best Treatment for Lesions of the Vocal Cords.* "Med. Rec.," July 9, 1892.

DIFFICULT as it is, absolute rest is to be insisted on. Unfortunately, it is almost impossible to obtain it. Even whispering has been observed to produce obvious deleterious effects. Out of twenty patients to whom the author ordered this absolute dumbness one alone had force of will sufficient to practise it, but the result was most brilliant. This patient was a physician, who, during the necessary period, carried on his practice by means of slate and pencil.

Dundas Grant.

Holden, E. H. R. (Birmingham).—*Foreign Body in the Larynx; Laryngo-Tracheotomy; Removal; Recovery.*

In the case of a boy, aged fourteen months, a hook, becoming suddenly disengaged from the mother's dress, fell into the child's food and became engorged in its larynx, causing stridor and cough. After dividing the cricoid (twenty-five hours after the accident) and introducing a probe upwards, a metallic body was felt and could be seen by separating the edges of the

cricoid. With sinus forceps the dress-hook was readily extracted, the patient leaving the hospital in twenty days. *Wm. Robertson.*

Heymann.—*On Traumatism of the Larynx.* Verein für innere Medicin in Berlin. Meeting, Oct. 24, 1892.

THE author examined a patient with the laryngoscope some hours after a fracture of the cricoid cartilage. He found the right arytenoid cartilage œdematous; the cricoid cartilage was cleft; the right vocal cord was mobile; both ligaments were red and thickened. Treated with ice cure followed twelve days later. The author also observed a patient who had been hoarse since his sixth year, when he was tracheotomized for diphtheria. The incision had cut the thyroid gland, and produced fixation of the left vocal cord by a cicatrix.

OPPENHEIMER showed a revolver ball, extracted from the nose of a syphilitic man who had shot himself in the head twelve years before.

Michael.

Moritz (Manchester).—*Primary Lupus of the Larynx.* "Brit. Med. Journ."

IN a man aged twenty-five, where the voice had become rough and husky a year ago, without cough or expectoration, pain slight, history good, lungs and other organs healthy, no bacilli in sputum; laryngoscopically part of the epiglottis was destroyed, the rest thickened and covered by nodules. Both ary-epiglottic folds were converted into nodular masses, the right with a loss of substance. A large inter-arytenoid loss of tissue was found. The ventricular bands were represented by nodular masses, while the vocal cords were nearly gone, the remaining parts thickened and nodular. The laryngeal mucosa was thickened and red. *Wm. Robertson.*

Gebb.—*On Benign Neoplasms of the Larynx.* Inaugural Dissertation, Würzburg, 1892.

A REPORT of twenty-one cases observed in Seiffert's ambulatorium. There were (1) seven fibromata; (2) nine cysts; (3) one angioma of the right sinus Morgagni, occurring in a patient sixty-five years old; (4) four papillomata. Of these two were children, and one of them died after tracheotomy. *Michael.*

Kulenkamp and Noltinius (Bremen).—*Carcinoid of the Larynx cured by Unilateral Extirpation.* "Berliner Klin. Woch.," 1892, No. 35.

A PATIENT, fifty-nine years old, was rather hoarse. The right vocal band was red and enlarged. There was no marked disturbance of mobility. Some months later pain in the head was complained of. Carcinoma was suspected. Galvano-caustic treatment was adopted. Three months later complete immobility of the right vocal band occurred. A little piece was excised and examined by Prof. Heller, who found thickened epithelium, with no certain evidence of cancer, but said that cancer could not be excluded. Prof. Krause, who also examined a piece, diagnosed carcinoma. The clinical diagnosis was made by the unilateral nature of the affection while the whole larynx was normal, the early occurrence of headache and radiating pains, and the immobility. No enlargement of glands existed. Operation was undertaken, viz., tracheotomy

and tamponing of the trachea with extirpation of the half of the larynx. Eighteen days later cure resulted. Ten months later the voice was rather hoarse, the general health normal, and there was no recurrence.

Michael.

Galatti (Wien).—*On Intubation*. "Wiener Med. Woch.," 1892, No. 22.

REPORT of fifty cases, with remarks. Nothing new. Michael.

Bokay (Buda-Pesth).—*My Experiences with O'Dwyer's Intubation*. "Jahrb. für Kinderheilk.," Band 32, Heft 3.

SEE the report of the meeting of the Pesther Med. Chirurg. Gesellschaft in this Journal for 1891. Michael.

Ewart, Wm. (London).—*Remarks on Tracheal Tugging, and on its Clinical Value*. "Brit. Med. Journ.," March 7, 1892.

A PHENOMENON, according to the author, observed in twenty-eight per cent. females and fifty per cent. males, in the absence of aortic disease, its demonstration being favoured by cardiac excitement and forced inspiration. In considering the value of tracheal tugging in the diagnosis of thoracic aneurism, the author instances cases where at one time it was confirmatory and at another nugatory. As to the supposed mechanism of tracheal tugging, any increase of or bulging, posteriorly or inferiorly, of the aorta passing over the left bronchus would cause the tugging. If, for example, the left vocal cord were paralyzed without tugging, then the probable conditions might be no posterior bulging, but some anterior enlargement of the arch of the aorta. The author *inter alia* attributes the slighter forms of tracheal tugging to the sphere of the pulmonary artery.

Wm. Robertson.

THYROID GLAND AND NECK.

Cristiani (Geneva).—*Researches on the Thyroid Gland of the Rat*. "Rev. Méd. de la Suisse Romande," Nov. 20, 1892.

I. *On Thyroidectomy in the Rat.*

The rat and rabbit are exceptions to the general rule that morbid symptoms follow total extirpation of the thyroid gland. In the rabbit, M. Gley has lately proved that two small accessory organs exist, placed below the thyroid gland, which, in the absence of the thyroid, develop and can replace the latter. Their ablation, along with or after ablation of the principal thyroid organs, determines the death of the animals. The author has studied the effects of thyroidectomy in the rat in forty-six cases, and concludes :—

(1) Total thyroidectomy causes death in from a few hours to some days, with symptoms like other animals, especially the cat.

(2) In cases in which the animal survives, which are numerous, extirpation of the organ has not been complete ; subsequent operation has

discovered one or many regenerated organs occupying the place of the older organs with a structure nearly the same as that of the extirpated organs.

(3) If the extirpated organ is engrafted in the peritoneum of the animal, the symptoms are prevented or amended and the life of the animal is saved.

II. *The Thyroid Glands of the Rat.*

The author has found accessory glands in the rat as in the rabbit, but they are not capable of supplying the place of the thyroid gland as in the latter animal. These accessory glands are two small rounded or cuneiform bodies at the antero-external edge of each lobe, distinct from the main organ and presenting the structure of the foetal thyroid gland. It is impossible to remove them during thyroidectomy. The cases where rats have survived the operation are those in which there has been a regeneration of the *débris* of the thyroid body which has escaped the operation. It is not to these glands that rats owe their survival of the operation.

R. Norris Wolfenden.

Gordinier.—*Report of Two Cases of Myxedema, with One Autopsy.* "New York Med. Journ.," Aug. 13, 1892.

ONE, a man aged forty-two years, died, and at the autopsy the liver showed thickening of the capsule and connective tissue in the organ. Marked thickening of the middle coat of the hepatic artery. Kidney showed increase of connective tissue and round-celled infiltration. Muscles normal. Thyroid gland tissue was entirely absent, and in place of it bundles of connective tissue, infiltrated with spindle cells, were found. Small extravasations of blood were seen in places, and the middle coat of the arteries was thickened. Skin—superficial layers of epidermis normal. At the junction of the mucous with the papillary layer of the corium an infiltration of densely-packed small round cells is seen, which extends down the sides of the papillæ, and is lost at their bases. The papillary connective tissue is in places also densely packed, but in other parts spaces are seen which are abnormally broad in the reticular layer. Hair follicles, sebaceous glands, and Paccinian bodies were normal. Sweat glands are almost entirely replaced by connective tissue.

B. J. Baron.

Eiselberg (Wien).—*Disturbance of Development in Sheep following Extirpation of the Thyroid Gland.* "Internat. Klin. Rundschau," 1892, No. 44.

SHEEP operated upon are not so large as normal, their heads are deformed, there is enlargement of the abdomen, and atrophy of the testicles. They resemble human cretins.

Michael.

Fürst (Leipzig).—*Lymphangioma Colli Congenitum.* "Archiv für Kinderheilk.," Band 14, Heft 6.

A TUMOUR of the size of a pea existed on the right side of a patient five years old. Extirpation was followed by cure. The microscope showed a reticulum filled with lymph.

Michael.

E A R .

Wolfenstein, J. (Cleveland).—*Cocaine in the Treatment of Acute Inflammations of the Ear.* "New York Med. Journ.," Nov. 5, 1892.

THE author speaks very favourably of the use of solutions of cocaine in acute inflammatory affections of the middle ear. In order to be efficacious the solution must be used immediately after the onset of the pain, and instillations should be repeated with every recurrence. The drug acts as an analgesic and antiphlogistic in acute inflammatory conditions. The preparation used by the writer is a five to ten per cent. solution of Merck's crystallized hydrochloride of cocaine. A few grains of boric acid are added to every ounce of the solution to ensure stability. The solution should be slightly warmed before being used.

W. Milligan.

Field (London).—*On Labyrinthine Deafness treated by Pilocarpin.* "Brit. Med. Journ.," April 2, 1892.

THE author speaks favourably of the drug in properly selected cases, and begins by injecting one-twelfth of a grain. Most benefit follows, it would seem, in syphilitic cases.

Wm. Robertson.

Swinburne, R. E.—*The Relation of Aural and Nasal Affections, based on One Thousand Cases of Otitis Media.* "Med. Rec.," August 6, 1892.

OF these one thousand cases of middle-ear disease ninety-five per cent. presented pathological conditions of the nasal and pharyngeal mucous membrane to account for the aural trouble. [The numbers, no doubt, are correct, but the mode of statement rather begs the question.—ED.] Of these 77 per cent. were of the various forms of rhinitis, 14·3 per cent. had deviations of septum, polypi, vegetations and enlarged tonsils, and 3·7 per cent. could be attributed to the throat complications of the exanthemata, leaving a balance of 4·7 per cent. in which the cause was not accounted for. Swinburne believes that inflammation extends from the nose and pharynx to the tympanum by direct extension by continuity of tissue, and not from rarefaction of air in the post-nasal space and tympanum during inspiration, due to nasal stenosis or from obstruction of the mouths of the Eustachian tubes by adenoid vegetations. He finds that many patients with nasal disease, if asked, say that they have aural symptoms, but the nasal disease is usually of an inflammatory rather than of a simply obstructive nature, unless the latter lead to catarrhal inflammation. He believes that naso-pharyngeal disease is often overlooked in cases of aural catarrh from want of practice in posterior rhinoscopy on the part of aural surgeons. [While feeling strongly that the writer's opinions are in the main correct, we think that he might with advantage have considered the assailability of his position a little more, and advanced his reasons for the faith that is in him somewhat more argumentatively.—ED.]

Dundas Grant.

Stetter (Königsberg).—*The Surgical Treatment of Deafness due to Disease of the Conducting Apparatus.* "Monats. für Ohrenheilk.," Aug., 1892.

In many cases where deafness is due to an affection of the conducting apparatus, great relief may be experienced by mobilization of the ossicular joints. In such cases the membrana tympani appears thick, opaque, white, and retracted. Conduction of sound through the cranial bones is usually preserved, but not always so, as in some cases the function of the terminal filaments of the auditory nerves may be in abeyance, owing to the effects of prolonged increase of intra-labyrinthine tension. In consequence of the thickening and retraction of the membrane in cases of chronic middle-ear catarrh, too great pressure is exerted upon the ossicles and the contents of the labyrinth. Ankylosis of the ossicular joints is also common, and the base of the stapes may become fixed in the foramen ovale. A pressure paresis of the organ of Corti results from this increased tension. Accompanying this condition tinnitus and vertigo are frequently complained of.

Catheterization and the use of Lucae's spring pressure sound generally fail to effect any permanent improvement.

The author has in several cases excised a portion of the membrane, and by means of a special hook has drawn upon the ossicular chain, with the result that adhesions are stretched or even severed, and the intra-labyrinthine tension in this way diminished.

In those cases where there is reason to suppose that a bony and not a fibrous ankylosis exists between the base of the stapes and the fenestra ovalis, the operation is contra-indicated.

To establish the fact that bony ankylosis is present between the base of the stapes and the margins of the fenestra ovalis, the entotic use of an ear trumpet fixed to a catheter, placed in the Eustachian tube, is of great value. If the patient hears words spoken (in a moderately loud tone) into the trumpet, it may be safely assumed that no bony ankylosis exists, for sound waves which reach the cavity of the tympanum in this way must be passed immediately from the base of the stapes to the contents of the labyrinth. The fact that bone-conduction is frequently restored after operations of this nature shows that even in those cases where a marked pressure paresis has lasted for a long time, the functional activity of the terminal filaments of the auditory nerve may be re-awakened when that source of pressure is removed.

W. Milligan.

Jack.—*Operative Treatment for the Relief of Chronic Suppurative Affections of the Middle Ear.* "Boston Med. and Surg. Journ.," June 2, 1892.

REPORT of three cases. The conclusions drawn by the author are:—

1. The removal of the drum membrane and ossicle is attended with little annoyance to the patient.
2. The operation often produces marked improvement of the hearing.
3. Satisfactory results may be expected towards the relief of tinnitus and vertigo.
4. The results of the operation seem to be permanent.

In proof of these statements statistics of twenty-three cases are quoted in which operation cured twelve in three months or less; one in

six months; five cases were improved; three were not improved, and two were lost sight of. At the same time the author does not advocate removal of ossicles and scraping, or caustic destruction of granulations, even though rough bone is felt, until other methods have been tried.

B. J. Baron.

Harrison, C. E. (London).—*A Case of Cerebellar Abscess secondary to Ear Disease, treated by Trephining and Drainage of Abscess; Death.* "Lancet," Oct. 1, 1892.

THE patient, a Dragoon Guard, was admitted, partially unconscious, and groaning as if in severe pain. His body was much wasted, the abdomen retracted, and there was a polypus and foetid discharge in the left ear. The mastoid was apparently normal, and there was no pain or swelling down the left side of the neck. Temperature, 98.2; pulse, 56. There was a history of acute suppurative otitis two years before, which was recovered from, but returned with an attack of scarlet fever four months before the present illness. Two months later he was seized with acute pain in the left ear and side of head, with troublesome vomiting, very slight diarrhoea, and no marked rigors. This lasted a fortnight, but shortly before admission he had a relapse, lost flesh rapidly, had occasional delirium, and was constipated.

The removal of the polypus made no difference, and it was determined to explore the temporo-sphenoidal lobe and cerebellum. In the former there was no pus, but in the latter the canula evacuated about three drachms. The abscess was irrigated and drained. Improvement took place as regards consciousness, but next day his respiration became irregular and almost of Cheyne-Stokes character. Death took place the following morning. The autopsy verified the diagnosis of abscess. There was no affection of the meninges beyond congestion and roughness of the dura in the posterior fossa and discoloration on the anterior and posterior surfaces of the petrous, a portion of which was necrosed. The writer regretted not having opened the abscess forty-eight hours sooner.

Dundas Grant.

Maughan (London).—*Cerebral Abscess; Slight Symptoms; Sudden Death.* "Brit. Med. Journ.," April 2, 1892.

THAT of a girl, aged seventeen, found dead by the author, who obtained a history that the deceased had complained of headache and impaired sight in right eye, and that she had been treated for polypus in right ear. The day before her death she was apparently well. At the *post-mortem* the inferior temporo-sphenoidal convolution was found to be torn up by foetid pus, and attached to the posterior surface of the petrous bone was a fibrous cyst the size of a pigeon's egg, also containing foetid pus, and ruptured on its inferior aspect. Underneath this a probe could be passed through the carious roof of the tympanum into the external meatus. Wm. Robertson.

Robinson, Beverley (New York).—*Disorders of the Ears in Typhoid Fever.* "Med. Rec.," Sept. 3, 1892.

THE ears are affected in a large number—about forty-three per cent.—of cases of typhoid fever. Tinnitus occurs often at the beginning of the

fever, but it is usually at the end of the second or during the third week that inflammatory conditions present themselves, and occasionally they produce perforation without any pain having been complained of. Hence the necessity for frequent inspection of the organs. The nature of the deafness seems very uncertain, and it is not made out how much it is due to extension of pharyngeal catarrh, and how much to the condition of the nervous system. Oppolzer recognized for it three distinct causes :— (1) propagation from the pharynx ; (2) the affection of the nervous system incident to the profound blood dyscrasia ; (3) periostitis of the middle ear. Barallier suggested that it was due to the administration of quinine, but Murchison denied that it was dependent on this, or to softening of the muscles of the middle ear, as was thought by Stokes. Of course, impaction of a ceruminous plug has to be excluded by inspection. The ordinary prophylaxis and treatment of ear disease is recommended.

Dundas Grant.

Cohnstädt, Ernst (Erfurt).—*Contribution on Tuberculosis of the Labyrinth.*
 "Monats. für Ohrenheilk.," May, 1892.

A GIRL, eleven years of age, had suffered from right-sided otorrhœa since the age of four. It had come on without any known cause, had occasioned no pain, and had long been left untreated. Swellings over the mastoid region had twice been treated by incision. Taken into the clinic she complained of pain over the whole of the right side of the head, and her temperature was 40·2° C. There was thick fetid pus in the right meatus. The membrane was seen, after syringing, to have been almost entirely destroyed, and the ossicles were not recognizable. The tympanic cavity was filled with rugged spongy granulations, the Eustachian tube pervious, the mastoid region free from swelling, the face slightly paralyzed. There was absolute loss of hearing for watch, tuning-fork, and whispered voice, and bone-conduction was completely lost. Microscopic examination of the discharge revealed quantities of tubercle bacilli. Next day the mastoid was chiselled open. There was no fistula, and after a few strokes of the chisel fetid pus welled forth. The mastoid was well cleared out with the sharp spoon, and the same evening the temperature decreased to 38° C. Improvement continued for eleven days, but the patient was then attacked with anorexia and retching, became comatose, and died. There was caries of the petrous bone. The labyrinthine structures were entirely destroyed, the cochlea and ampullæ were replaced by connective tissue. The facial canal was eaten into, and was full of pus. There was basal meningitis, and an abscess of the size of a walnut in the right lobe of the cerebellum. The route of the pus was not evident, but it appeared to have followed the facial nerve to the posterior fossa, where it had reached the cerebellum. The pus in the labyrinth contained bacilli in great quantity. In all chronic otorrhœas bacilli should be looked for, and in scrofulous patients are almost always found. In such cases the bone is very liable to be affected, and therefore the mastoid should be opened without waiting for swelling or tenderness.

[The painless onset is very characteristic of tuberculous otitis.—ED.]

Dundas Grant.

Smith (Cheltenham).—*Foreign Body in the Ear*. "Brit. Med. Journ.," Feb. 27, 1892.

A LARGE prism-shaped piece of stone enveloped in cerumen, said to have been lodged in a man's left ear for thirty-seven years, and only to have given rise to symptoms during a few months, probably on account of the wax having more completely occluded the meatus within that time. After removal the membrana tympani was found uninjured. Hearing restored.

Wm. Robertson.

Ryan, J. P., and Barrett, J. W. (Melbourne).—*Removal of Lead from the Ear by the use of Metallic Mercury*. "Lancet," Oct. 15, 1892.

IN the case of a child who had pushed a leaden bullet into his ear an endeavour was made to diminish its bulk by means of metallic mercury (syringing, etc. being unavailing), as was done by Mr. Marmaduke Shield in one case. The result was absolutely disappointing and experiments were conducted for the purpose of explaining the discrepancy. It was found that sheet lead was only very slightly diminished in weight after being immersed in mercury for sixteen hours. They suggest that the "lead" in Mr. Shield's case was probably "plumber's solder" (2 of lead to 1 of tin), as distinguished from "tinman's solder" (1 of lead to 1 of tin), "pewterer's solder" (1 of lead to 2 of tin), and sheet lead. The result was:—

Substance.	Weight before immersion.	Weight after immersion.	Loss.	Time.
Plumber's solder ...	22 gr. ...	10 gr. ...	12 gr. ...	16 hours
Tinman's solder ...	22 gr. ...	17 gr. ...	5 gr. ...	16 hours
Lead piping ...	17 gr. ...	15 gr. ...	2 gr. ...	16 hours
Sheet lead ...	11 gr. ...	9½ gr. ...	1½ gr. ...	16 hours

[A knowledge of these facts may prevent disappointment and account for varying success.]

Dundas Grant.

Pepper (London).—*Disease of the Mastoid Bone*. "Brit. Med. Journ.," March 5, 1892.

THE author draws attention to "preventible deaths from chronic ear disease," and as causes of the high mortality suggests the tendency with surgeons to defer operation on account of the frequently observed difference of symptoms and the repugnance to interfere where the region is dangerous. The causes of otitis media and damage to the mastoid bone were discussed, and the mortality from pyæmia and intra-cranial mischief stated to be higher than it should be. Reference was made as to the way in which inflammatory progress was effected towards the large blood vessels and brain, and the appropriate steps of treatment demanded in each case. In connection with the above communication several authorities took part. Mr. Cheadle referred to a case of meningitis secondary to ear disease. The patient was trephined without result. At the *post-mortem* plastic lymph was found in the middle ear, the inflammation extending to the brain and optic nerve, while the membrana tympani was not perforated. Dr. Scanes Spicer thought 85 per cent. of cases of mastoid disease were due to adenoid vegetations and always preventible of course. Dr. William Hill showed (1) a temporal bone with tegmen

very thin; (2) one in which the mastoid cells nearly approached the lateral sinus; (3) one with a perforation between the mastoid cells and the sinus; (4) one with a very large mastoid foramen. J. Jackson Clarke showed a section of a temporal bone of a child, aged three years, where the whole of the antrum was above the upper border of the meatus; in another, from an adult, two-thirds was below the same, and in both little room existed between the lateral sinus and the posterior meatal wall. Dr. McNaughton Jones showed his ivory scale for determining the position of the trephine in opening the skull in different sites. *Wm. Robertson.*

REVIEWS.

Schrötter (Wien).—*Vorlesungen über die Krankheiten des Kehlkopfs der Luftröhre der Nase und des Rachens.* ("Lectures on Diseases of the Larynx. Trachea, Nose and Pharynx.") Sixth part, with 11 woodcuts. Wien and Leipzig: Wilhelm Braumüller, 1892.

THIS part concludes the first volume of the interesting work of this well-known author. The thirty-fifth lecture treats of *neuroses of the larynx, hyperæsthesias, paræsthesias, and anæsthesias*. Effective treatment the author often found in gargling with cold water and brushing with chloroform and opium. The thirty-sixth chapter treats of *nervous cough and glottic spasm*. The spasm is often produced by hysteria, tabes, tetanus and lyssa; the diagnosis is easy; treatment by nervine tonics. Concerning nervous cough the author relates an interesting case in which a cough could be produced by the introduction of a probe into a fistula colli congenita. The name "chorea laryngis," first suggested by the author, should be preserved because the symptoms resemble chorea and are often combined with true chorea. The thirty-seventh lecture treats of *disturbances of co-ordination and atactic movements of the larynx*. The symptoms of aphonia spastica are very minutely described, and the reading of this chapter must be especially recommended. Dyspnoea spastica should be regarded as a severe affection which merits more attention than the author gives, who only deals with it in a few lines. The thirty-eighth and three following lectures treat of the *different forms of paralysis and pareses* in a very excellent manner. With regard to the many papers published during the last few years without much change in the views of the author enunciated in his former publications as to treatment, he now agrees with the recommendation of the use of cocaine, whose effect lasts only a short time. The book concludes with a register of authors and a general index. *Michael.*

Zuckerkandl (Wien).—*Normale und Pathologische Anatomie der Nasenhöhle und ihrer Pneumatischer Anhangs.* ("Normal and Pathological Anatomy of the Nasal Cavity and its Pneumatic Appendices.") Volume II., with 24 lithographic plates, 223 pages. Wien and Leipzig: Braumüller.

THE first volume of this excellent work appeared ten years ago. It contained the history of the anatomy and physiology of the parts, with a

description of the methods of dissection, normal and pathological anatomy of the nasal cavity, the antrum of Highmore, the frontal, ethmoidal, and sphenoidal sinus, and was (like the present volume) illustrated by twenty-two lithographic plates. This volume was a complete work, which systematically treated of the whole subject. The illustrations contained in it were so instructive that they have been reproduced in many works which have appeared since that time. The second volume now published contains the results of the new works which have appeared since that time, and the author's own new experiments, numerous casuistics, and forms a supplement to the first publication. The first chapter contains an exact description of the cartilaginous and osseous septum, and is of practical interest in regard to the development of the different forms of malformation of the septum. The second chapter treats of the different forms of fractures of the cartilaginous and osseous nose in their anatomical relations. The third chapter deals with the interesting question of the etiology of deviations of the septum, with special regard to the so-called physiological deviation. In the fourth chapter, treating of rhinitis, the author refers to an affection not yet described, which he calls xanthosis, consisting in a brown, yellowish discoloration of the nasal mucous membrane, often following acute and chronic rhinitis ozæna, and of partial atrophy of the septum, followed by perforations.

The fact that epistaxis (chapter 5) usually arises from the septum is not explained by any special anatomical peculiarities (Hajek, Voltolini), but only from the fact that this part is more exposed to traumatisms. As to the *ulcus perforans nasi*, the author agrees with Hajek and Voltolini that it is not caused by lues and tuberculosis, but by hæmorrhages or traumatisms, and especially by xanthosis. In the next chapter (7) the author describes the diseases of the antrum of Highmore with some casuistic remarks. The serous form is often followed by return to the normal condition, but sometimes by polypi, pseudo membranes, and pigmentosis. Chapter 8 contains a complete description of nasal mucous polypi, warty and polypous hypertrophy of the nasal mucous membrane, and papillomata. Ozæna (chapter 9) is an inflammatory process, followed by typical destruction of the nasal mucous membrane, and eventually of that of the appendix cavities. The author never found the process begin with hypertrophy. Chapter 10 enriches the casuistics of synechia by twenty-one cases. An exact description of ten cases of syphilis is contained in chapter 11. Chapter 12 contains some remarks on tuberculosis. Chapter 13 describes the anatomical consequences observed in two cases of rhinoliths found in cadavers. Chapter 14 details two cases of osteoporosis of the head and face, in which the author found the lamina perpendicularis ossis ethmoidei transformed into a thick osseous tumour. Chapter 15 refers to cases of teeth inserted in the antrum of Highmore. Chapter 16 contains interesting contributions to the knowledge of dental cysts, empyema, and hydrops antri Highmori. Chapter 17 deals with polypi of this cavity; chapter 18 with empyema of the ethmoid. Chapter 19 describes a prominent vertebra resembling a pharyngeal tumour. The author here remarks that he has not found a similar case, but two such cases have been described, one by P. Heymann

in Berlin, and the other by the reporter. The illustrations to both volumes are very clear and instructive.

The book must be recommended to all who must admit that it is of the greatest interest to observe such things in the cadaver as are usually seen only during life.

Michael.

Miller, W. D. (Berlin).—*The Micro-Organisms of the Oral Cavity, and the Local and General Diseases which are produced by them.* ("Die Mikro-Organismen der Mundhöhle, und die Ortlichen und Allgemeinen Erkrankungen welche durch dieselben hervorgerufen werden.") With 134 woodcuts in the text, and 18 photographs, 448 pp. Second enlarged and improved Edition, Leipzig: Georg Thieme, 1892.

IN this Journal for December, 1889, we dealt in a detailed report with this excellent and important book. The second edition having appeared in so short a time proves that we were right in recommending it. The contents are so much increased in this new edition that it seems to be a new book. The review of the literature of the subject is increased from 219 to 460 references. In the chapter on antiseptics of the mouth we find new researches on a great many of the antiseptic medicaments recommended during the last few years, and ingenious experiments upon their relative efficacy. The number of the micro-organisms in the mouth has increased from twelve to twenty species. The book concludes with an instructive catalogue of the complications produced by diseased teeth or dental operations.

Michael.

Allen, Samuel Ellsworth.—*The Mastoid Operation, including its History, Anatomy, and Pathology.* Cincinnati: Robert Clarke & Co., 1892.

THOSE who have felt called on to attack the apparently healthy mastoid process must have found that many questions concerning the operative details have occurred to their minds, the answers to which were not clearly stated in the works on aural surgery within easy reach. There are some who shut their eyes to the advances of this branch of surgery, and by their practice and influence retard its progress and bring discredit on their fellow practitioners, but the progressive and conscientious aurist will welcome the clear, detailed, and fully illustrated instructions given in this attractive little volume, which embodies the results of a protracted observation and study of the methods of operation practised at the present time by Prof. Schwartze in his famous *clinique* at Halle.

The work treats first of the history of the operation, then of the anatomical points involved, next of the pathological considerations, and lastly of the *technique*. As our busy and practical readers—like the circus-proprietor who, on the production of *Hamlet* as an equestrian drama, insisted on cutting the "patter" and getting "to the 'osses"—will probably read the chapters in the opposite order, we shall take first Chapter IV.—The Operation. The antiseptic precautions practised by Schwartze are founded on those adopted by Von Bergmann. They include boiling the instruments for five minutes in a one per cent. caustic soda solution, steam sterilization of gauze and cotton wool (for use as dressings and instead of sponges), asepticism of the operator and assistants (hot water, soap, pure nail-

brushes, then alcohol, then sublimate solution), preparation and cleansing of the patient (parts round the ear especially being washed, brushed, soaped, shaved, rinsed with water, then with ether, then with one per thousand sublimate solution). Along with the usual instruments is used a single-pronged blunt retractor. The well-known landmarks are employed, and the conical opening made with gouges. He warns against working downwards—the apex of the cone should be three or four millimètres higher than the spina supra meatum (*vide infra*)—and so, in our anxiety to avoid the middle fossa, missing the neck of the antrum, and working inwards to the facial nerve. A bent probe is to be constantly used. When the antrum is reached the point can be passed downwards and forwards into the tympanum. If we chisel as directed *and find no antrum*, “we must never go deeper than the distance from the surface “to the inner drum margin of the meatus, measured as we have stated “(page 34) along the upper posterior wall.” If no antrum is reached after penetrating for a centimètre and a half, the artificial canal should be carried forward “so as to bring its apex over the meatus, when we can “easily chisel into the attic, and, working backwards, guided by a “sound, lay open the antrum.” The membranous meatus may be dislodged from the posterior wall if necessary. The sinus projects forward in sclerotic mastoids more frequently than in those which are pneumatic, unless the sclerosis is merely the result of inflammation. All spicules and ridges have to be thoroughly cleared away with the sharp spoon, and the canal cleansed with gauze or cotton.

In acute cases with carious perforation of the cortex the bone is exposed in this way, the fistula enlarged, sequestra and granulations removed, and communication with the antrum established. If no pus is found in the antrum the cortex, from the tip of the process, should be chiselled away, as the pain may be due to inflammation in one of the apical cells. A healthy appearance of the cortex should not, according to the writer, prevent us from exploring the antrum and cells.

Stacke's operation is described as the typical one to be practised in chronic cases, but the modification of it as now practised at Halle is recommended as quicker and easier. In the latter the antrum is opened as above described, “the membranous meatus is then dislodged from “the superior and posterior walls, and held forward against the anterior “wall by a one-pronged retractor.” The intervening wall of bone between the antrum and the external meatus is now chiselled away. The malleus and incus and the outer wall of the attic are removed, and the ridge remaining between the meatus and antrum is cleared away. The posterior wall of the membranous meatus is then divided horizontally from the tympanum to the concha; at the outer extremity of this incision a vertical cut is made, so that a rectangular flap is formed, which is pressed from the meatus well into the new cavity by means of a tampon.

The indications for the operation are :—The occurrence in cases of acute otorrhœa of mastoid symptoms not relieved by ice, leeches, etc., in from twenty-four to forty-eight hours, or the occurrence of mastoid pain with swelling in the postero-superior wall of the meatus (and not a

furuncle); carious fistulous openings in the mastoid region, or in the postero-superior wall; the presence of cholesteatomata as shown by extrusion of small white epidermic masses during syringing in chronic otorrhœa; threatening brain-symptoms; the persistence of chronic otorrhœa in spite of treatment; the persistence of fœtor in spite of syringing; the down-flow of pus from above and posteriorly in spite of excision of the ossicles. The removal of a portion of the cortex is indicated in cases of obstinate neuralgia of the mastoid when all other remedies fail.

The anatomical chapter gives ample description of the measurements, relations, and varieties of the parts concerned, and it is illustrated by photo-gravures showing the most constant appearances. The prominence formed by the external semicircular and facial canals on the inner side of the "neck" of the antrum is well brought out in Plate III., Fig. 2, *x*, which by an error is referred to on page 50 as "Plate II., Fig. X." The omission in this chapter of the description of the mastoid process of the child and infant is to be regretted.

The chapter on the pathology is clear and interesting. Among the points dwelt on are:—The readiness with which inflammation of the mucous membrane lining the tympanic, epitympanic and mastoid cavities extends to the bones; the points of exit of mastoid pus; the frequency of caries of the upper posterior margin of the drum; the presence of tubercle in some cases; the nature of cholesteatomata and the various modes by which they lead to meningitis, sinus-phlebitis, and cerebral abscess.

The history of the subject is sketched at some length, and is carried onward to the epoch formed by the publication of Stacke's method of operation.

The book is got up in a most attractive form, is of a most convenient size, and is sure to command a ready sale.

Dundas Grant.

Cathell, D. W. (Baltimore).—*Book on the Physician himself and things that concern his reputation and success.* Tenth edition, carefully revised and greatly enlarged. The F. A. Davis Co., Philadelphia and London, 1892.

A BOOK which has reached its tenth edition is already beyond criticism. It is justified by its success. At the commencement of this work the author imagines himself confronted by the question—"How can I conduct myself in the profession, and what honourable and legitimate means shall I add to my scientific knowledge and book learning, in order to make my success in the great professional struggle more certain, more rapid, and more complete?" And to this he replies—"First, last, and in the midst of all, you should, as a man and as a physician, found your expectations of success in your personal and scientific qualifications, and keep whatever is honest, whatever is true, whatever is just, and whatever is pure, foremost in your mind, and be governed by it. If you do not you will not deserve to succeed in the honourable profession of medicine, and no honest man can wish you success." In some 335 pages the author lays down and discusses the methods of accomplishing this great ideal. This he does in plain and forcible language, with at times racy

and just criticism of many medical follies, and he has produced a work the reading of which cannot fail to be of the greatest profit to younger members of the profession, and of equal interest to maturer practitioners. He has chosen a difficult thesis, and skilfully handled it.

R. Norris Wolfenden.

ASSOCIATION MEETINGS.

AMERICAN MEDICAL ASSOCIATION.

1 *Note on the Etiology of Laryngismus Stridulus.* By Dr. JOHN O. ROE, Rochester, New York.

After mentioning the different theories as to the cause of this affection put forth by Kopp, Ley, Marshall Hall, Elsasser, Ledesser, and others, Dr. Roe called attention to the recent theory advanced by Hughlings Jackson, in which he ascribes the affection to the abnormally soft ribs in rachitic children (in whom the affection most often occurs), which renders the action of the diaphragm insufficient, and thus, especially during sleep, when the attacks commonly occur, there is over-stimulation of the respiratory centres by supervenous blood, an excess of the natural stimulant, which results in convulsions.

Since the adductors, as well as the abductors of the vocal cords, are controlled by nerves centring in the medulla, it is readily seen that stimulation of this centre may result in spasmodic adductor disturbance.

Why the nerve centre in the medulla controlling the adductor muscles of the larynx is more susceptible to irritation, or to its normal stimulus than the nerve centre controlling the abductor muscles of the larynx, Dr. Roe explained by the fact that these nerve centres are rendered susceptible by irritation of the larynx itself; and that more or less continued irritation of the larynx has the effect to excite these nerve centres to undue activity. So that an irritation that would itself have no appreciable effect, would, when the nerve centres have become irritable and hyperæsthetic, have the effect of producing abnormal manifestations in the parts under the control of these nerve centres.

Nasal obstruction and irritation combined with oral respiration is an important factor in the production of laryngismus stridulus; in fact, all conditions that tend to cause irritation of the larynx will produce attacks of this affection.

Dr. Roe stated in conclusion that in the causation of laryngismus stridulus there must exist the following conditions:—

1. A chronic irritation of the larynx.
2. An abnormal activity of the motor centres of the medulla, rendering them more susceptible to the normal blood stimulus, and also more

¹ Abstract of a paper read before the Section of Laryngology and Otology of the American Medical Association held in Detroit, Mich., June 7th, 1892.

sensitive to irritants applied to the peripheral nerve filaments, as a result of irritation of the larynx.

3. An unequal susceptibility of the abductor and adductor muscles to local irritation, and also an unequal stimulation of their nerve centres by the normal blood stimulus. The abductors of the larynx, situated on the outer portion of the laryngeal framework, are not so much subject to local irritation, their motor centre in the brain is less excited and less susceptible to its normal stimulus, and spasm of the abductor muscles is, accordingly, less frequent than spasm of the adductor muscles, and less persistent when it occurs.

THE PARIS SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY.

Meeting, July 1, 1892.

Researches on the Anatomical Causes of Deviation of the Nasal Septum. Does there exist any relation between this Deviation and the Antero-Posterior Inflexion of the Axis of the Face? By Dr. POTIQUET.

The author has already dealt extensively with the general etiology of deviations of the nasal septum (see JOURNAL OF LARYNGOLOGY, July, 1892). He refers in detail to the conclusions of Schaus from experiments made in the clinic of Prof. Trendelenburg, and to Lissauer's anthropological work. His own researches were conducted on the four hundred skulls in the museum of the amphitheatre of the hospitals, and are very minute. His conclusions are that in the Parisian the osseous nasal septum tends to incurve laterally so much the more as the movement of rotation of the premaxillary around the point of junction of the postero-superior extremity of the vomer with the body of the sphenoid, taken as a centre, is more marked. This conclusion may be regarded as a verification, applied to a very limited group, of a law common to the whole series of primates—to wit, that the nasal septum has so much the greater chance of lateral incurvement as the axis of the face is itself the more inflected in its antero-posterior direction. As this axis is more and more inflected as one rises from the anthropoid to the European male, the nasal septum tends to incurve laterally more and more as one follows this ascending series. Lateral curvature of the septum, therefore, appears to be an evolutionary phenomenon related to the degree of antero-posterior inflexion of the axis of the face.

Over and above this general relation, is it possible to ascertain the proximate cause why the septum is straight in some and curved in others? And may not we seek for the reason of this lateral curvature, at least partly, in the difficulty which the fundamental cartilaginous plate may find in adapting itself to the movement of rotation with retreat which the premaxilla describes, solidly fixed on the one hand, and in the superior maxilla on the other hand. From that, to the consideration of the lateral septal curvature as the result of our imperfect accommodation of the fundamental cartilaginous plate which primitively constitutes it, to the movement of antero-posterior inflexion of the axis of the face, is not a great step. This is only an hypothesis, and, like many hypotheses in science, is incapable of direct verification.

We may go a little further. In this act of adaptation the special tendencies of the septum are not a negligible quantity, and granted that it is according to the line which unites the premaxilla to the spine of the sphenoid that the septum especially curves, and it is in this line that accommodation seems particularly

imperfect, could not a deviated septum be often considered as a septum too long in an antero-posterior direction? In fact, considering on the skeleton the so frequently incurved upper edge of the vomer, it would seem that this bone in these cases is called upon to develop more amply in an antero-posterior direction than it is really permitted. One step more; is not a septum too long, one which has omitted to accommodate itself to new conditions—in other words, an ancestral septum?

Anomalies explicable by comparative anatomy are, it is true, more common in the nasal cavities, but it is not a region of the body where reversion occurs as frequently. But considered as an ancestral septum, and given the extreme frequency of inflexions, it would not be extravagant to say that a man has only exceptionally the septum which belongs to him. An analogy is found in the defect of accommodation of the uterus to adjustment of the spine from the upright position of the human species, which ends in anteversion of that organ. This useless amplitude of the fundamental cartilaginous septum might be compared to the useless simiesque projection of the cartilages of the helix mentioned by Darwin.

Let the Darwinian projection of the helix be more pronounced than usual and the result is of little consequence, since the cartilage of the pavilion can extend at will, but it is not the same for the septal cartilage, and if it happens from some obscure original impulse that it lengthens a little from behind forwards, surrounded by powerful organs which limit it, it is forced to inflect. Comparative anatomy shows the conformation of primitive ancestors tending to reappear in descendants even far removed. Is not the nasal septum especially inclined to these phenomena?

Dr. RUAULT remarked that in lunatics deviations of the septum and even of the vomer exist, and it would be interesting to study the relations existing between these deviations of the septum and cranial asymmetry.

Dr. GOUQUENHEIM called attention to the relation which these deviations of the septum and cranial asymmetry and nasal obstruction had with asymmetry of the face and orbit of the same side, and the influence they could exert on the visual functions, referring to Ziem's work in this direction.

Dr. POTIQUET replied that researches in the direction of Dr. Ruault's suggestion would be interesting but difficult, for the junction of the cerebral cranium with the facial cranium is scarcely accessible to investigation even on the skeleton. Ziem's work does not appear to have led to any conclusions so decisive as Dr. Gouguenheim apparently thinks. A defect of symmetry of the bones constituting the face and the cavities which they limit is indeed the rule. A defect of symmetry of the nasal cavities and of the cavities is, on the same subject, of very frequent occurrence, and it is not possible to establish between the two asymmetries any relation of cause and effect.

The Thickenings of the Antero-Inferior Portion of the Nasal Septum. Rôle of the Subvomerine Bones and the Cartilages of Jacobson. By Dr. POTIQUET.

The great majority of thickenings of the nasal septum—always excepting the septal tubercle—may be divided into two categories according to the region they occupy, namely those of the antero-inferior portion of the septum, and those forming the lateral crest of the vomer. The latter, usually smooth on the concave side and more irregular on the convex, are due to the incurvation of the fundamental cartilaginous plate. Those of the antero-inferior portion depend on the growth of the various elements entering into the composition of the part, which are the crest of the os incisivum, the heads of the two subvomerine bones, the anterior extremity of the quadrilateral cartilage, and the cartilages of Jacobson.

Between the incisive (intermaxillary) bone and the crest of the palatal process of the superior maxilla is interpolated a wedge-shaped bone, with its apex down-

wards, surmounted by a head which forms part of the general crest. It is higher than the portion behind it, but in early life about the same height as the crest of the os incisivum. The two subvomerine bones form together part of the gutter in which is received the portion of the vomer in front of its horizontal plate. They continue to develop more or less irregularly, and when the part of the floor formed by the os incisivum becomes lowered after the eruption of the permanent middle incisors the subvomerine bones project upwards and form with the Jacobsonian cartilages many of the outgrowths or spurs of the antero-inferior portion of the septum. The anterior point of the vomer abuts on these subvomerine bones, between which and the sphenoid it is fixed. From want of mutual accommodation in developing, the vomer and the subvomerine may press against each other, when sometimes the latter standing fast the vomer has to bend, or sometimes the head of the subvomerine yields and bends outwards so as to form a spur.

The subvomerine bone is the homologue of the median palatine apophysis of the mammalian intermaxillary bone. The forward flexion of the superior maxilla which takes place during growth and is most characteristic of the orthognathous human skull involves an upward extension of the subvomerine bones. This flexion is most pronounced in the highest races, and carries with it a tendency to lateral curvature of the septum.

The quadrilateral cartilage is found on section to be much thinned at a little distance above its lower border, and along a line parallel with this. Higher up, again, at the "tubercle" it is thicker. Owing to this peculiarity of structure we find deviations of the septum marked on one side by a deep furrow, and on the other by a flat, or only slightly convex, surface. The cartilages of Jacobson, vestiges of Jacobson's organ, can usually be found, in the young child at least, as two small lamellæ or rods of gristle, flanking the inferior border of the quadrilateral cartilage. They have, according to Sappey, "the form of an elliptical tongue, "with the long axis directed from before backwards, describing a curve with the "concavity turned upwards. Their length varies from six to twelve or fifteen "millimètres." Occasionally they are partly or entirely wedged in below the quadrilateral cartilage, partially covering the side of the apophyses of Steno (subvomerine bone), and the anterior part of the vomer, and in one instance simulating a dislocation of the quadrilateral cartilage.

Dr. POTIQUET concluded by referring to the necessity of studying in lower animals the nature of the deformities of the nasal septum. The lateral curvatures are the outcome of the antero-posterior flexion of the axis of the face (transition from prognathism to orthognathism). The thickenings sometimes result from duplicatures caused by the above-mentioned flexion, and sometimes from overgrowth of the median palatine apophysis to one side or the other. Others are the result of defective involution, and result from the persistence of Jacobson's cartilages, which—like the vermiform appendix—are a useless and often injurious inheritance.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 20th, 1892

("Medical Record," November 5th, 1892).

ALFRED L. LOOMIS, M.D. (*President*), in the Chair.

THE meeting was held under the auspices of the Surgical Section, Dr. JOSEPH D. BRYANT, Chairman.

Intubation versus Tracheotomy for Acute Laryngeal Stenosis in Children
—*To what Extent, if at all, has Intubation supplanted Tracheotomy?*

Dr. JOSEPH O'DWYER read a paper, opening the discussion on this subject. He said that while it would have been very easy to prepare a long paper upon it, he had found it difficult to prepare a short one. By acute stenosis of the larynx was meant the stenosis which occurred in fibrinous, diphtheritic, or membranous croup. If unrelieved by mechanical means this would prove fatal. The disease still continued one of the most fatal of early life. An illustrative case was related in which, in spite of intubation, which gave complete relief for about twelve hours, the temperature, pulse, and respiration increased, the latter to about eighty, and thirty hours after intubation the child died. Some would say there must have been broncho-pneumonia, yet the autopsy showed none, death having resulted from blocking of the bronchial tubes with pseudo-membrane as far as could be traced.

Not uncommon causes of death were catarrhal pneumonia, nephritis, and paralysis. If mechanical obstruction from membrane in the larynx alone were the only question in these cases, intubation would certainly be a most efficient method and should have scarcely a failure.

As it would be impossible in a brief paper to answer all the charges that had been made against intubation, especially the accidents and dangers, he would confine his remarks upon this part of the subject to a consideration of criticisms in a paper by Dr. Lovett, of Boston, in which was recited the experience with intubation in the Boston City Hospital. The principal, if not the only, cause of the bad results obtained at that institution was that the operations were performed by a number of different men, more or less inexperienced, who appeared on the staff by rotation. The only difficulty met with by experienced operators was the tendency of the tube in a few cases to engage in the sub-glottic fold, and yet the experienced operator meeting with such difficulty knew how to overcome it. An analysis of the accidents cited by Dr. Lovett showed clearly that they were in almost all instances due to the operation having been done by inexperienced men or to carelessness. Sudden death occurring while the tube was in the larynx must be due either to obstructing membrane or to heart paralysis, but more frequently did pushing of membrane before the tube give relief than cause stenosis.

One of the gravest objections which had been offered to intubation was the difficulty afterwards of feeding. When, however, the tube was introduced with care and skill this difficulty existed only exceptionally. If the parts were injured by clumsy efforts to pass the tube, it would be remarkable if the little ones did not suffer during deglutition afterwards. When the operation was really called for the patient was getting but little air, and this little could be cut off only a very short time without endangering life; even ten seconds was not safe. To pass the tube, then, as speedily as should be done and cause no injury required practice, which should be gained on the cadaver and in different subjects, for some subjects were more difficult to intubate than others. Tracheotomy implied no such danger. No great amount of surgical skill was required

to do tracheotomy, but subsequent intelligent nursing was almost an absolute necessity. One practice, therefore, called for trained nurses, the other for a trained operator.

It appeared that at the Boston City Hospital intubation had been followed by about twenty per cent. recoveries, and tracheotomy by about twenty-nine per cent. One could hardly believe that the smaller number of recoveries following intubation could have been due to the operation so much as to the manner in which it was performed, for the percentage of recoveries at the Willard Parker Hospital had been thirty-eight, and another operator had had thirty-four per cent. of recoveries in over one hundred cases. In fact, the percentage of recoveries at the Boston City Hospital had been lower than any individual results that he knew of, and there were sufficient reasons for it.

Of the factors which influenced the prognosis in intubation and tracheotomy, age was the most important. The results of intubation in the first year of life were almost *nil*; the third year was better than the second, and after the third year and a half age did not play an important rôle. Lovett had said that tracheotomy saved one in fourteen under two years, while intubation in Dr. O'Dwyer's cases had saved one in six.

Secondary tracheotomy was not likely to prove of much avail when intubation failed because of membrane extending to the trachea. The author thought that from all the facts presented the conclusion seemed inevitable that intubation accomplished practically all that tracheotomy accomplished without any of the unpleasant features of the latter operation,

Dr. LEWIS PILCHER, of Brooklyn, continued discussion with a paper. He thought that in any case of exudative laryngitis it was absolutely impossible to exclude the existence of diphtheritic infection. This was of importance in considering operative measures. The laryngeal affection was but the effect of a general disease. The general effects of that disease were to be guarded against, and local emergencies were to be prepared for.

Granting that both intubation and tracheotomy would remove the laryngeal stenosis, which was best adapted to assist the system in its struggle against the general infection? The answer to this question involved three points—blood aeration, local cleansing and antisepsis, and general nutrition.

Intubation as well as tracheotomy met the first point, and intubation admitted air which was warmed in the natural passages, but it did not admit so well of meeting further obstruction down the trachea, and it was also liable to detach membrane in the larynx and push it before the tube. To meet these results it might be said that theoretically tracheotomy could be resorted to secondarily, but practically it was then too late.

Tracheotomy permitted of the air being warmed and medicated, and of removal of obstructing exudate coming up into the trachea. It also permitted of carrying on nutrition perfectly, whereas, judging even by the statements of Dr. O'Dwyer himself, he inferred that the presence of the tube in the larynx caused considerable difficulty with feeding the child.

It would seem, then, that the three points were met better by tracheotomy than by intubation. Whether these advantages of tracheotomy were real or imaginary could as yet hardly be determined by statistics. The difference in the character of the cases, and the fact that intubation was much more likely to be permitted than tracheotomy, formed the greatest obstacles in the way of a correct judgment.

He would accept Dr. O'Dwyer's personal experience with intubation without question, and among the first set of cases which he had reported twenty-four per cent. had recovered; later ones had given even a better result. Of 21,000 cases of tracheotomy collected by Lovett, twenty-eight per cent. had recovered. Dr. Pilcher's own results from tracheotomy for membranous laryngitis had been twenty-two recoveries out of sixty-six cases, or thirty-three and a third per cent. On the other hand, one of his neighbours had intubated a number of cases and had fifty per cent. recover.

While he did not wish to gloss over the disadvantages attached to tracheotomy, yet he thought intubation answered the indications for surgical interference when the diphtheritic exudation had formed within the larynx and trachea much less perfectly than did tracheotomy, and that therefore, as a rule, it should not be considered a substitute for tracheotomy in such cases.

To what Extent has Intubation supplanted Tracheotomy?

To this question Dr. PILCHER answered, evidently to a very considerable extent during the past few years in this country. Tracheotomy would always be accepted as a last resort unless it were in institutions, and he did not doubt but what for this reason intubation would save many lives which would without it be lost, parents rejecting what he regarded as the safer procedure until too late, if they permitted it at all. His neighbour had within four years intubated 140 cases, 40 of which, or twenty-nine and a half per cent., recovered, whereas Dr. Pilcher had had opportunity to tracheotomize only 66 cases in seventeen years, with recovery of one-third. Yet the cases of diphtheria in Brooklyn had remained about the same. This showed that intubation was both supplanting tracheotomy and also making a new field for itself. He thought there should be pavilions or houses scattered in different parts of the city, where diphtheritic cases could be readily transferred and put under skilled medical attendance, and as soon as the emergency arose a surgeon connected with the hospital of which these were a branch should be called to do tracheotomy. This would show better actual and comparative results for the bloody operation.

Dr. GEORGE W. GAY, of Boston, read a paper in continuation of the discussion. The statistics which he brought from the Boston City Hospital were later than those of Dr. Lovett, although they did not differ much; they showed about four per cent. in favour of the older operation.

In the majority of cases the result of intubation depended upon three conditions: laryngeal obstruction, bronchial croup, and septicæmia. The type of the disease, more than anything else, determined the result after the operation. In very many instances the operation was satisfactory

although the result itself was fatal. The patient succumbed to sepsis or other trouble, but not to dyspnoea. In 110 cases at the Boston City Hospital, in 75 intubation resulted in immediate and complete relief of the dyspnoea, partial relief in 22. Surely any method which gave immediate relief in nine cases out of ten was worthy consideration. As to whether tracheotomy would give relief where intubation failed, it might where the tube pushed membrane before it, enhancing the dyspnoea, but this accident was not common. But where the dyspnoea was due to extension of the morbid process or sepsis there was little hope. In 58 cases of secondary tracheotomy at the Boston City Hospital, only seven recovered.

The author attributed many of the failures with intubation to employment by unskilled hands. He also said that the diminished number of tracheotomies at the Boston City Hospital, and the much larger number of intubations, showed that the latter had considerably supplanted the former. In the majority of cases in children under seven years intubation was preferable to tracheotomy.

Dr. F. E. WAXHAM, of Chicago, could not be present, and sent his recent statistics of intubation. He believed intubation would yield results which could not be obtained by tracheotomy. His cases were not selected, but included all requiring it which came under his observation. The number of cases for the several years of age were given, with percentage of recoveries. In all he had intubated 421 cases, with 146 recoveries, or 34.67 per cent. In the first 100 cases there had been 27 recoveries; in the second, 34 recoveries; in the third 40 recoveries; and in the last 21 cases there had been seven recoveries.

Dr. A. JACOB referred to a discussion on this subject before the Academy four or five years ago, at which it was all intubation, while to-night it had been part intubation and part tracheotomy. At the former meeting he endorsed intubation, notwithstanding the fact that he had been a pioneer in the performance of tracheotomy in this country, having resorted to it in a great many cases. Indeed, his statistics with tracheotomy must now run up to 600 or 700. The reason why he then and now endorsed intubation in preference to tracheotomy was the fact that it was very easy among the public at large to get permission to intubate, while it was very difficult to get permission to tracheotomize. Because of this difficulty the latter operation was often put off until it was known to be almost certainly too late. Yet now and then a case operated upon at so late a stage did recover, and it justified interference even in apparently hopeless cases. Another weighty reason for turning to intubation was the fact that, no matter what amount of care was exercised, infection and erysipelas or diphtheritic deposit might take place at the tracheotomy wound. Moreover, tracheotomy sometimes necessitated leaving the tube in a long time. While endorsing intubation, he confessed to not having performed it himself, for the reason that Drs. O'Dwyer, Huber, or others skilled in the operation had been within so convenient reach.

Dr. FRANCIS HUBER sent a note in which he said that both tracheotomy and intubation would relieve the dyspnoea, but after considerable

experience with both measures he expressed preference for intubation as a primary procedure in laryngeal diphtheria. The mortality of either operation varied in different epidemics, the variations depending upon other conditions than the operation. Both procedures might present intrinsic difficulties in individual cases, and might be attended by unforeseen complications. Unfortunate results from inexperience and the use of improper instruments could not be placed as objections to intubation. The difficulties of *technique* in young children were not limited to intubation, but were often equally great in tracheotomy. Whatever might be the difference of opinion regarding the comparative results in older children, under two years and a half intubation gave a higher percentage of lives saved. He incidentally mentioned the great value of bichloride of mercury in diphtheria, as recommended by Dr. Jacobi.

Dr. BERG had performed intubation in a considerable number of cases, and in all it gave immediate relief to the dyspnoea, but the picture was apt to change within twenty-four hours. The following objections to the procedure had led him to practically abandon it: 1, interference with feeding and nutrition, which was of such great importance; 2, interference with the administration of a solution of bichloride of mercury, as recommended by Dr. Jacobi, which also was of extreme importance, for, greatly to his surprise, he had found since adopting this treatment that its curative powers had been so great as to lessen the number of cases requiring intubation or tracheotomy fifty per cent. The bichloride, unfortunately, would act on the tube.

Dr. W. P. NORTHUP related some observations in Vienna and London during the past summer, illustrating the right and the wrong way of choosing tubes and introducing them into the larynx. He believed that, as a rule, difficulty from feeding the child wearing the laryngeal tube came from its unskilful introduction and injury to the parts.

One speaker said he had seen a number of patients wearing the laryngeal tube at the Willard Parker Hospital, and taking food without any difficulty, and that the house physician there employed irrigation with bichloride freely without causing any injury to the tube.

Another speaker thought the weakness following some hours after the introduction of the tube was due to inability to fully respire, and finally complete stenosis and death. A second objection to the tube was the liability to cough it up during the absence of the physician. He had lost one patient from that cause.

Dr. JOHNSON, of Jersey City, was not sure that where the tube was coughed up the cause was always membrane; nor did he think dyspnoea the usual cause of a change of the picture for the worse about twenty-four hours after introducing the tube.

**REPORT of the FIRST MEETING of the CONGRESS of the ITALIAN
SOCIETY OF LARYNGOLOGY, OTOTOLOGY, AND RHINOLOGY,**

Held at the University of Rome, October 26-28, 1892.¹

From Notes by the Secretary, Prof. A. FASANO.

THE inaugural meeting on the morning of October 26th was held at the Presidency, under the auspices of the Committee composed of Profs. Grazzi, Massei, Fasano, Masini, and Dr. Egidi. Amongst the invited guests were Commander Ferrando, representing His Excellency the Minister Martini; Commander Calenda, Prefect of Rome; Prof. Toscani, representing the Rector of the University; Prof. Rosseo, Assessor of Hygiene; Profs. Baccelli, Durante, Maragliano, many physicians, and other guests, including several ladies. During the inaugural sitting the following dispatch was received from His Excellency the Minister for Public Instruction. "I regret that it is not possible for me to assist at the inaugural meeting of the Society, which I thank for its amiable invitation, and I am confident that, with the prosperity and beneficent character of the new institution, there is a fresh benefit to science and a new splendour added to Italian studies. MARTINI."

To this dispatch the President replied on behalf of the Congress. "S. E. le Ministre Martini,

"The Italian Society of Laryngology, Otology, and Rhinology, while thanking your Excellency for your amiable attention, will do all that is possible to render itself worthy of its mission under the patronage of your great assistance. GRAZZI."

The associates present were Dr. Louis Ajello (Naples), Dr. Fauste Brunetti (Venice), Dr. Conrad Corradi (Verona), Dr. Antoine Damieno (Naples), Dr. Ignace Dionisio (Turin), Dr. Francois Egidi (Rome), Prof. Adolphe Fasano (Naples), A. Francois Felici (Rome), Dr. Joseph Ficano (Palermo), Dr. Vincent Garzia (Naples), Prof. Joseph Gradenigo (Turin), Prof. Victor Grazzi (Florence), Dr. Joseph Isايا (Naples), Prof. Charles Labus (Milan), Dr. Sauveur Marano (Salerno), Prof. Jules Masini (Genoa), Prof. Ferdinand Massei (Naples), Prof. Masucci and Dr. Vincent Morra (Naples), Dr. Victor Nicolai (Milan), Dr. Joseph Nuvoli (Rome), Dr. Compte Francois Roncalli (Bergamo), Dr. Charles Secchi (Bologna), Dr. Joseph Strazza (Genoa), Dr. Alexander Trifiletti (Naples).

Dr. Carmelo Abate (Catania), whose absence was apologized for by Dr. Fasano, and Dr. Bobone (San Remo) were admitted associates.

Prof. V. GRAZZI, of Florence, opened the session by thanking his colleagues for the honour they did him in selecting him as president. He referred to absent colleagues in affectionate terms, and speaking of physicians who followed their practice far from scientific centres, he hoped that a short time would see all who left the University schools

¹ This report is merely a summary of the proceedings of the session. The Secretary edits the volume containing the full report of the Congress, in which will be found the various theses and discussions in full, along with all the public and private acts of the Association.

thoroughly equipped with theoretical and practical knowledge, to recognize and treat at least the most frequent affections of the important organs of speech, hearing and smell.

He then made reference in rapid survey to the history of the Italian Society of Laryngology, Otology, and Rhinology, which had its inception at Sienna, in consequence of his suggestions last year, when the General Medical Congress met in that town. He exhorted his colleagues to render it worthy by its works and its common accord of amiable Sienna, which was the cradle of the Society, and of illustrious Rome, which was chosen as the permanent seat of the Association; and having referred to the great international reunion which will take place in this metropolis next year, he concluded with the hope that the constant efforts of the Society of Laryngology, by its intelligence, efforts, and work, would succeed in rendering these special studies always more worthy of public esteem, for the well-being of those who suffered and for the honour of Italy. To this address of the President, which was warmly applauded, Prof. Massei added some words in acknowledgment of Prof. Baccelli, who ought to be considered a benefactor to the Society, since it was he who, when Minister of Public Instruction, founded the first chair of Laryngology in Italy, remarks which were received with general applause.

Dr. ALEXANDER TRIFILETTI, assistant to the Clinic of Laryngology of Naples, then read a long communication interesting to general physicians upon *The Importance of Laryngology, Otology, and Rhinology in Medical Practice; Considerations and Propositions*.

This thesis, developed with great intelligence and with serious appreciations, was listened to with great interest, especially its latter part, where the author made allusion to the few means yet existing of studying these specialties, and expressed the desire that this teaching should be provided in all the universities of the kingdom, and that they should be made obligatory.

The session terminated at 11.30 in the morning.

AFTERNOON SESSION.—TWO O'CLOCK.

Private Meeting.—President, Prof. GRAZZI.

VOTING was taken for the Council of the Society, and the following officers were elected:—President, Grazzi; Vice-President, Massei; Councillors, Labus and Gradenigo. Secretary of the Society, Fasano; Secretary to the Council, Corradi; Treasurer, Egidi.

On taking the presidential chair, Prof. Grazzi thanked his *confrères* for the testimony of their esteem and sympathy.

Public Meeting.—President, Prof. GRAZZI.

The Phases, Nature, and Therapeutics of Papillomata of the Larynx.
By Prof. MASSEI, Naples.

Amongst the phases special and common to papillomata of the larynx, that which attracts most notice is *retrogression*, if not constant at

least frequent at the end of a certain time. While this is a feature of which particular notice must be taken in the explanation of the marvellous disappearance of certain tumours in some conditions, which, however, do not always prevent the death of the patient from laryngo-stenosis if assistance be not given, it permits us to review the anatomico-pathological history of these productions. And in giving a rapid survey of their structure, we cannot deny that their structure is represented by a small number of fibres of connective tissue, chiefly in which young cellular elements or true myxomatous tissue prevail. There are some papillomata which ought to be considered as being rather granulomata, and on such grounds we can conceive the idea of their disappearance after tracheotomy. These considerations must influence treatment greatly, violent methods (laryngo-fissure, laryngotomy) being illusive and too aggressive. So if endo-laryngeal treatment does not suffice or is impracticable, tracheotomy alone should be enough. For direct treatment scraping, when combined with treatment with ichthyol (1 to 100) in cases of infiltrative tumours, ought to be preferred, and this treatment is recommended for its prompt and certain effect.

Prof. GRAZZI asked the reader if he had observed the nature of the tumour to change after extirpation, scraping, or other operative measures?

Dr. NUVOLI confirmed what Massei had said *à propos* of the spontaneous evolution without any operation, relating a case he had seen.

He put several questions to the speaker, as also did Dr. Egidi.

Answering Grazzi, Prof. MASSEI said that at the commencement of his professional career he believed that papillomata could change in nature, but he now believed the opposite.

Prof. GRAZZI related *Two Cases of Papilloma of the Uvula*. After the interesting remarks of Prof. Massei upon papillomata of the larynx he thought that his communication had only a small value, but he desired to make it because it seemed to him that papillomata of the uvula were rather rare and also because the symptoms were disproportionate to his idea, in comparison with the smallness of the condition. These disorders ought to be considered in great part as nervous troubles of reflex action. He then described the two cases in detail, with the symptoms and the treatment adopted.

LABUS remarked that he had in his practice observed several cases of papilloma of the uvula, and he had some now under treatment.

FELICI thought with Grazzi that they were rare, as he had only seen one case, and in that the growth was not entirely in correspondence with the uvula.

Dr. AJELLO read a paper on *The Laryngeal and Tracheal Phenomena of Gout*, which was discussed by Corradi, Nuvoli, Trifiletti, Massei, Masini, and Fasano.

Dr. DAMIENO read a paper on *Pachydermia Laryngis* (a histological note), which was discussed by Masini, Dionisio, and Massei.

Dr. EGIDI read a paper on *Epithelioma of the Larynx*, upon which Dr. Nuvoli made some observations.

Prof. FASANO recorded some *Clinical Studies on the Symbiosis of Laryngeal Syphilis and Tuberculosis*. Masini and Nuvoli made several observations, and Massei, Felici, and Prof. Maiocchi took part in the discussion.

Meeting of October 27th, at 9 a.m.—President, MASSEI.

Dr. GARZIA read a paper upon *Oral and Pharyngeal Pemphigus*.

Dr. MARANO presented a paper upon *Epithelioma of the Left Tonsil*.

Dr. STRAZZA (Genoa) presented a paper on *The Diagnosis and Treatment of the Diseases of Accessory Cavities of the Nose*.

Affections of the sinuses were divided into those of neoplastic nature, and those of secretory nature. McBride, of Edinburgh, has also established two groups—affections of the sinus which dilate the cavities, and those which do not. To the first group belong mucous tumours and suppurative conditions, in which by the closure of the natural opening pus burrows a way to the exterior; to the second group empyema properly so-called. Without ignoring other forms, the author dwelt more fully upon the suppurative form as most interesting in rhinology. He established rules for differential diagnosis between carcinoma and sub-acute empyema of the antrum, tumours in general, and mucocoele.

As to the *antrum of Highmore*, mucocoele is characterized by dilatation of the sinus. Exophthalmos frequently also exists. The external walls of the antrum sometimes become papyraceous, thus permitting fluctuation. Illumination is useful to exclude solid tumours by reason of the side affected assuming a more marked redness than the healthy side. Treatment consists in giving an exit to the liquid, and correcting that which impedes respiration. Suppurative conditions present acute and chronic forms, the former being distinguished by an accentuation of the subjective phenomena. Chronic forms have as characteristic signs—(1) a flow of pus, inconstant and foetid; (2) the presence of creamy pus in the middle meatus along with a polypoid mass. B. Fraenkel's sign, when present, is of great importance. Illumination gives uncertain results. Exploratory puncture with the needle is the only means of arriving at a certain diagnosis.

Dr. STRAZZA gave a *résumé* of the treatment. In acute forms all methods lead to cure, if there are no adverse dyscrasic conditions. In chronic forms the method of Hartmann ought to be adopted. When this is not possible, and when suppuration is continuous, trephining the cavity through the alveolus or the canine fossa should be performed, and followed by tamponing with iodoform gauze. This treatment should be repeated every five days. The author prefers opening through the canine fossa, since by this means direct inspection of the cavity is possible.

With regard to the *frontal sinus*, mucocoele has the general characters of slow dilatation of the cavity. Illumination and exploratory puncture confirm the diagnosis. The treatment consists in making a large opening and removing the bony masses. Nasal opening is not necessary. In

the suppurative conditions which open spontaneously towards the internal side of the orbital wall, the diagnosis is made from the fistulous track.

Treatment should consist in a free opening into the cavity in the transverse line, and removal of the purulent and polypoid masses and the osseous portions which are often found. A nasal opening is indispensable. In forms which show a free flow, *i.e.*, in true empyema of the frontal sinus, diagnosis is sometimes difficult when subjective phenomena are wanting, and rhinoscopy only reveals the presence of pus in the middle meatus. The absence of intermittence in the flow, and of Fraenkel's sign, would indicate an affection of the frontal sinus.

Illumination and exploratory puncture of the maxillary sinus are useful in excluding an affection of the antrum. If exploration succeeds, the diagnosis can be confirmed by irrigation. Treatment ought to consist of exploration of the fronto-nasal canal and disinfectant washes. The topography of the canal in most subjects renders this manœuvre impossible, and in those cases where it is impossible from the first, or after many irrigations, the anterior wall ought to be perforated.

As to the *ethmoidal cells*. Mucocoele of this region exhibits itself by an osseous tumour in the nasal fossæ, and exophthalmos always exists. Neoplasm is excluded by the slowness of the development. Illumination allows us to exclude solid growths, and exploration with the needle confirms the diagnosis. Suppurative forms are generally relieved by dilatation of the cavity.

When this does not follow, diagnosis becomes difficult, and it is necessary to exclude affections of the frontal and maxillary sinus.

To say that in empyema of the anterior ethmoidal cells pus is found in the middle nasal meatus, and in empyema of the middle and posterior ethmoidal cells the pus is found in the olfactory rima, is a statement of no practical value. Treatment consists in opening the cavities and curetting the parts.

As to the *sphenoidal sac*, anatomico-pathological researches show that this cavity is the frequent seat of suppurative processes, especially in general infective forms, but in the living subject diagnosis is difficult. The speaker had not had occasion to observe it, and therefore avoided speaking of it.

Prof. MASSEI demonstrated the difficulty of diagnosis and treatment, especially of the frontal sinus, by reason of its peculiar anatomy. He dwelt upon exophthalmos as a pathognomic symptom, which oftener falls under the observation of the oculist than the rhinologist.

Dr. POLI insisted upon the importance of ophthalmological examination.

Drs. FELICI and GRADENIGO joined in the discussion, and STRAZZA replied.

Dr. DIONISIO made a communication upon *Deviations of the Nasal Septum and their Treatment*, and presented instruments. Drs. Gradenigo, Massini, Ficano, Felici, Masucci, Nuvoli, and Nicolai joined in the discussion.

Dr. DIONISIO read a communication upon *Nasal Tuberculosis*. Drs. Massei, Masini, and Strazza discussed it.

Prof. FASANO spoke *On Mercurial Treatment in some so-called Nasal Scrophulides*.

NUVOLI gave the history of a case in which the diagnosis was doubted, but after Fasano's exposition he felt no further doubt in including the case in this category. Prof. De Amicis confirmed Fasano, and related some similar cases.

Prof. MASSEI made a communication *On the Treatment of Large Naso-Pharyngeal Tumours*.

Prof. MORRA reported *Clinical Studies on Ozæna*.

Dr. NICOLAI presented a circular saw for operations upon the nose, and exhibited his electric laryngoscope.

Dr. ISAIA read a communication entitled *Therapeutic Contribution upon the Otorrhœas of Scrofulous Subjects, and on Crusting Chronic Rhinitis*, which was discussed by Prof. Fasano.

Morning Meeting, 28th October.—President, MASSEI.

Papers were read by—

POLI, on *Chronic Nasal Glanders*.

NICOLAI, *Empyema of the Antrum of Highmore*.

Strazza, Damieno, Trifletti, Massei, Poli, and Nicolai took part in the discussion.

EGIDI, *Two Cases of Chronic Croup*.

Poli, Massei, Trifletti, Nicolai, Ficano, Masini, and Egidi discussed the paper.

Upon the proposition of Prof. Masini a commission of three members (Egidi, Concetti, and Masucci) was appointed.

STRAZZA, *Bacteriological Considerations in Ozæna*.

FIACCARINI, *Diphtheritic and Scarlatinal Sore Throat*.

MAIOCCCHI, *Actinomyces of the Tongue and Larynx*.

FICANO, *Case of Hysterical Mutism*.

MASINI, who had a communication on the same subject, supported a long physiologico-pathological discussion, arriving at conclusions directly opposed to Ficano.

Massei and Damieno joined in the discussion.

Prof. MASSEI presented some *New Intubation Tubes for Adults*, and an *Apparatus for School Demonstration* (praxinoscope).

Afternoon Meeting.—President, GRAZZI.

Prof. MASSEI read a paper entitled "*Cicatricial Hypoglottic Stenosis*."

EGIDI related notes of *Eighty-two Intubations, and as many Tracheotomies; a Contribution to Statistics*; upon which a prolonged discussion followed.

At a private meeting the President read a letter addressed to Prof.

de Rossi, asking him to join a Commission to prepare modifications to be introduced into the Statute, and read Prof. de Rossi's letter accepting the same.

Two resolutions presented to the Government were read, one signed by Profs. Massei, Grazi, and Fasano :—

“ The Assembly, after the thesis of Dr. Trifiletti on the importance of Laryngology, Otology and Rhinology in practical medicine, unanimously approves of his conclusions, and prays S. E. the Minister of Public Instruction that, following the initiation of many European Universities, the teaching of Laryngology, Otology and Rhinology ought to be made obligatory in every Italian University.”

On the Diagnostic Importance of the Perception of Sounds by Perosseal and Aerial Conduction in Diseases of the Ear. By Dr. CORRADI, Verona.

The work is divided into three parts ; the first gives a description of the signification and object of certain methods of examination, and of the best way of practising them. In regard to speech the author holds that it is not a reliable test for hearing, although so generally recommended, and that simple tones ought to be preferred, especially before coming to any definite determination, as for example, whether a patient ought to be submitted to treatment or not.

He described the various tests, and expressed some ideas on the way of practising Rinne's experiment; and suggests a theory which goes to explain the increased sensibility for low tones through the bones, as in the experiments of Rinne and Schwabach. He next considered objections which had been made to the experiments of Weber and Rinne on sensibility for high and low tones, especially those by Steinbrügge, Kieselbach, Schwabach, and Jacobson, and endeavoured to confute them.

In the second part he described the physiological foundation of his experiments, and in the third parts his methods and his manner of tabulating the results. He replied to some objections raised by Gradenigo and Masini, referring them to his forthcoming work for the necessary luminous explanations. A discussion followed, in which Gradenigo, Masini, Trifiletti, Grazi, Egidi, and Corradi took part. A committee consisting of Professors Corradi, Gradenigo, and Masini, was appointed for the purpose of investigating the controverted points and reporting their results.

Functional Energy of the Acoustic Nerve. On Bone Conduction in Otitis Media in general. By Prof. GRADENIGO. (The results obtained from an examination of the ears at the Royal Institute, Victor Emmanuel, for blind children, at Florence).

The author undertook these observations in order to test the general belief that the loss of one sense is compensated for by the perfection of another. It is thought that the deaf have a very strong sight, and that the blind have very good hearing power. Of the thirty-seven pupils examined, twenty-one were boys and sixteen girls ; among the first there was only one with very acute hearing, ten with pretty good hearing, and ten with aural disease past or active, rendering them comparatively deaf.

Among the girls there was not one with very acute hearing, nine heard pretty well, and seven had deficient hearing from past or present auricular disease. Gradenigo, Nuvoli, Poli, and Isaia asked several questions concerning the ages of the children, the causes of their blindness, the diseases (either general or of the nose and throat) which might have contributed to make diseases of the ear so frequent in this Institution.

On the Functions of the Otologist and Laryngologist in Institutions for the Deaf and Dumb. By Prof. GRADENIGO.

He explained the system on which he examined the organs of smell and the pharynx and larynx in deaf and dumb pupils of both sexes, and set forth the chief difficulties met with, especially in examining the larynx. He thought that every deaf and dumb institution should have an otolaryngologist. A formal recommendation to the Minister of Public Instruction was proposed by Masini to the effect that in all institutions for the deaf and dumb the work of the instructor should end where that of the specialist began.

Diseases of the Labyrinth and their Diagnosis. By Prof. MASINI.

Prof. MONPORGO, of Trieste, was elected a corresponding associate.

Profs. POLITZER, DELSTANSCHÉ, of Brussels, and B. FRAENKEL, of Berlin, were unanimously elected associates. Other business was transacted.

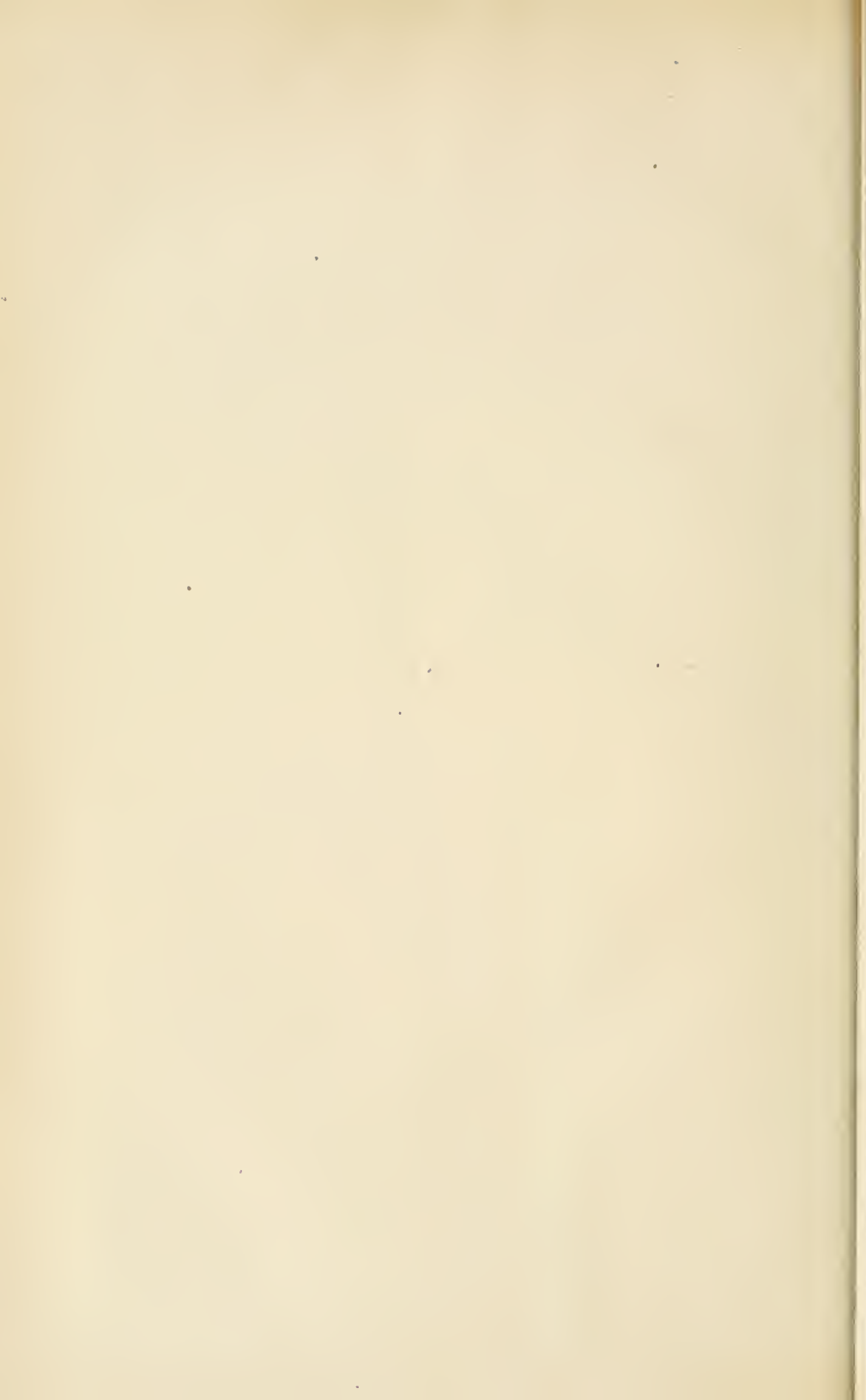
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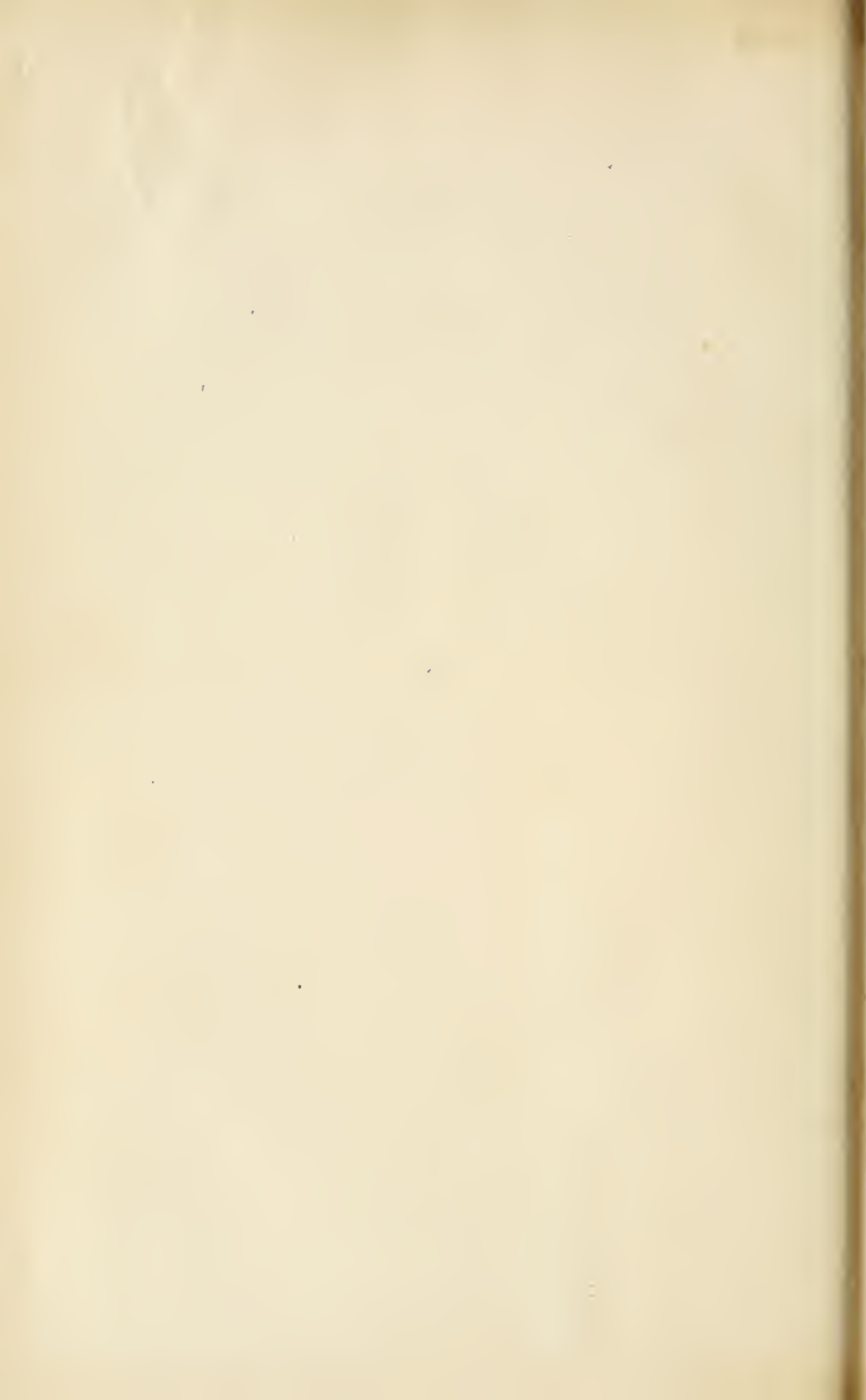
THE next General Meeting of the BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION will be held at the Medical Society's Rooms, 16, Chandos Street, W., on December 9th, when a discussion will take place on Mr. Mayo Collier's paper, "The Surgery of the Frontal Sinus."

ERRATUM.

ON page 491 (lines 2 and 29) of the October number of the JOURNAL the "word lanoline" in Dr. Seth Bishop's communication should have been "lavoline," which is a purified liquid vaseline.







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